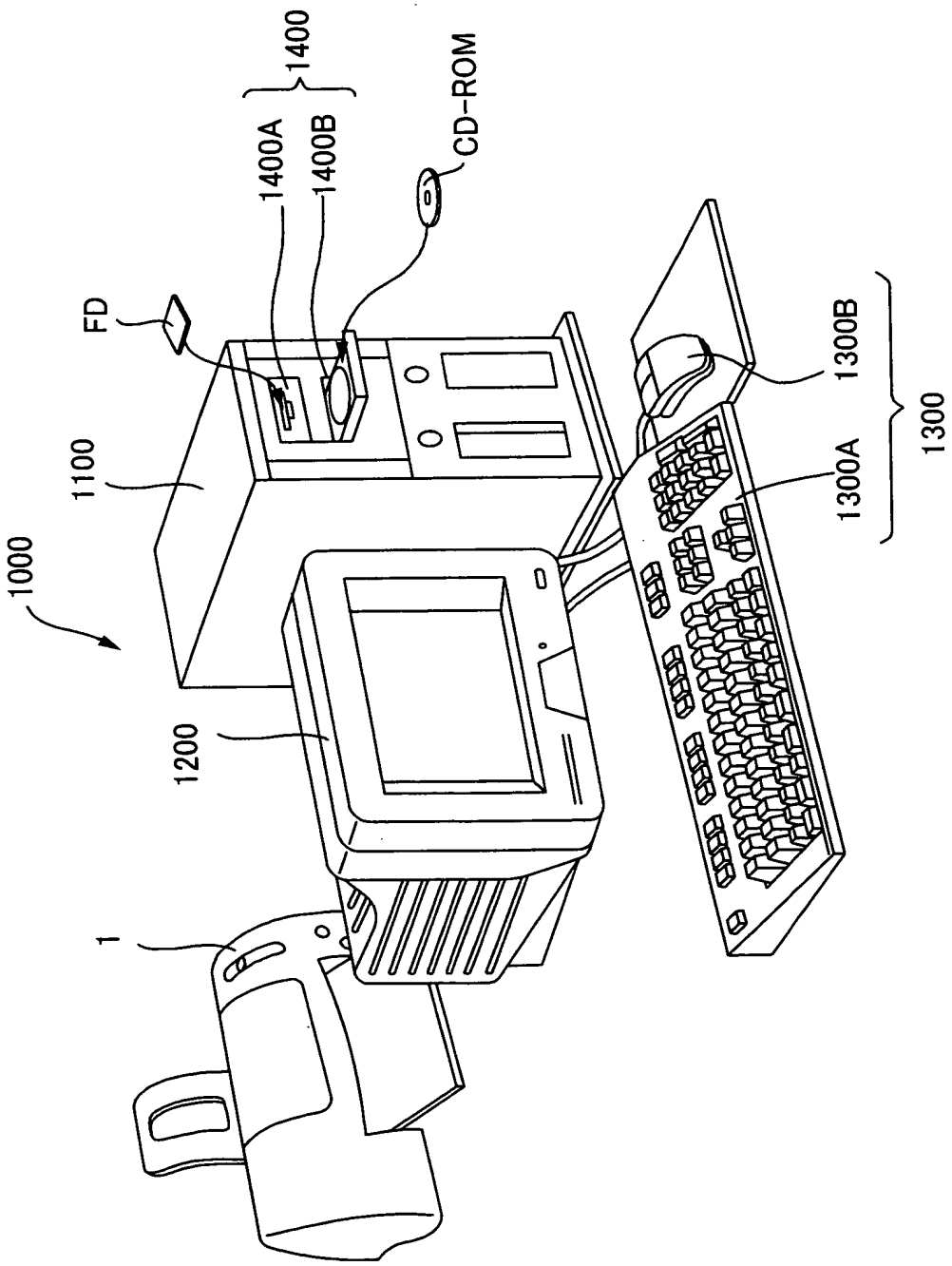


Fig.1

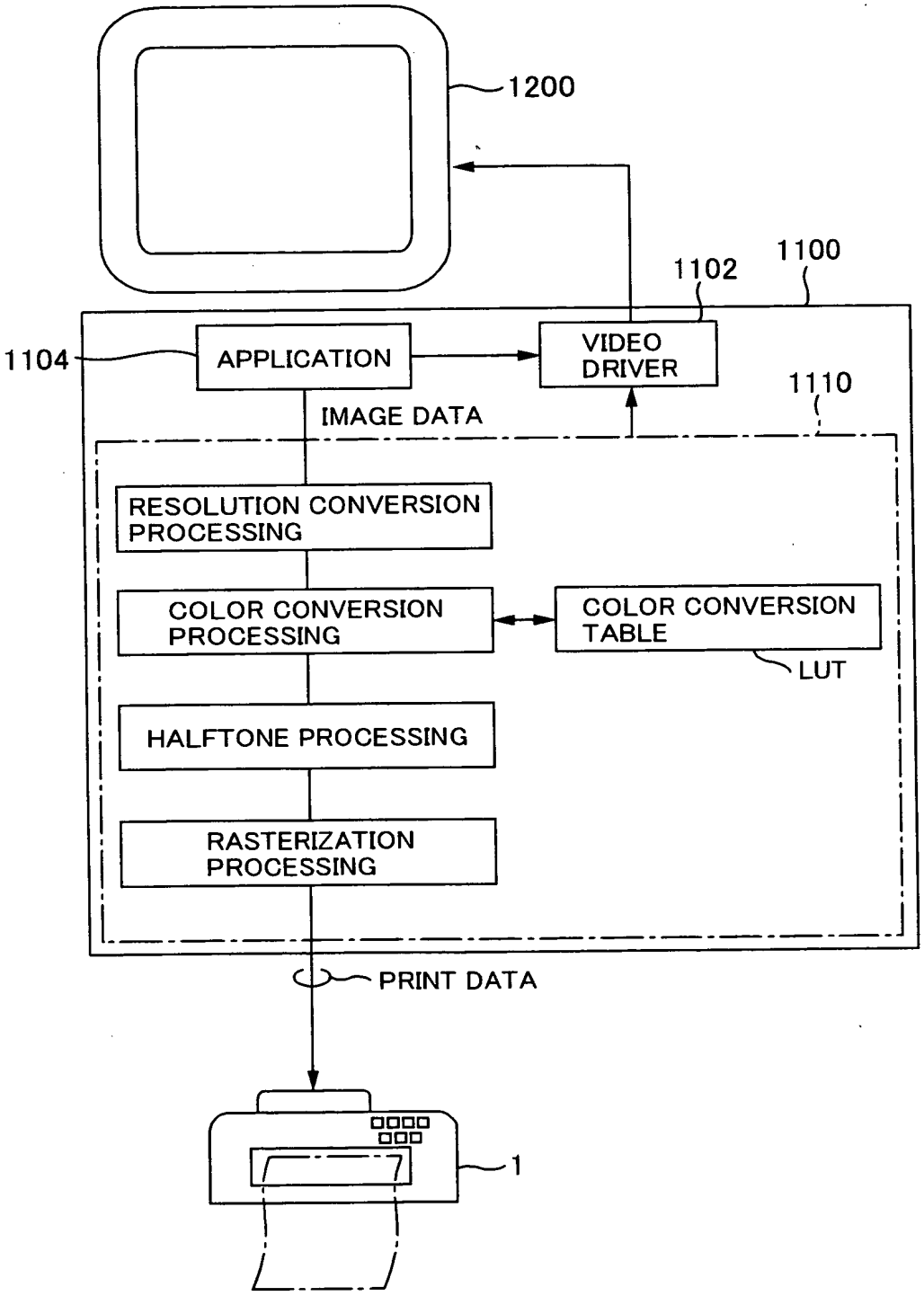

1200
1102
1100
1104
APPLICATION
VIDEO DRIVER
1110
IMAGE DATA
RESOLUTION CONVERSION PROCESSING
COLOR CONVERSION PROCESSING
COLOR CONVERSION TABLE
LUT
HALFTONE PROCESSING
RASTERIZATION PROCESSING
PRINT DATA
1

Fig.2

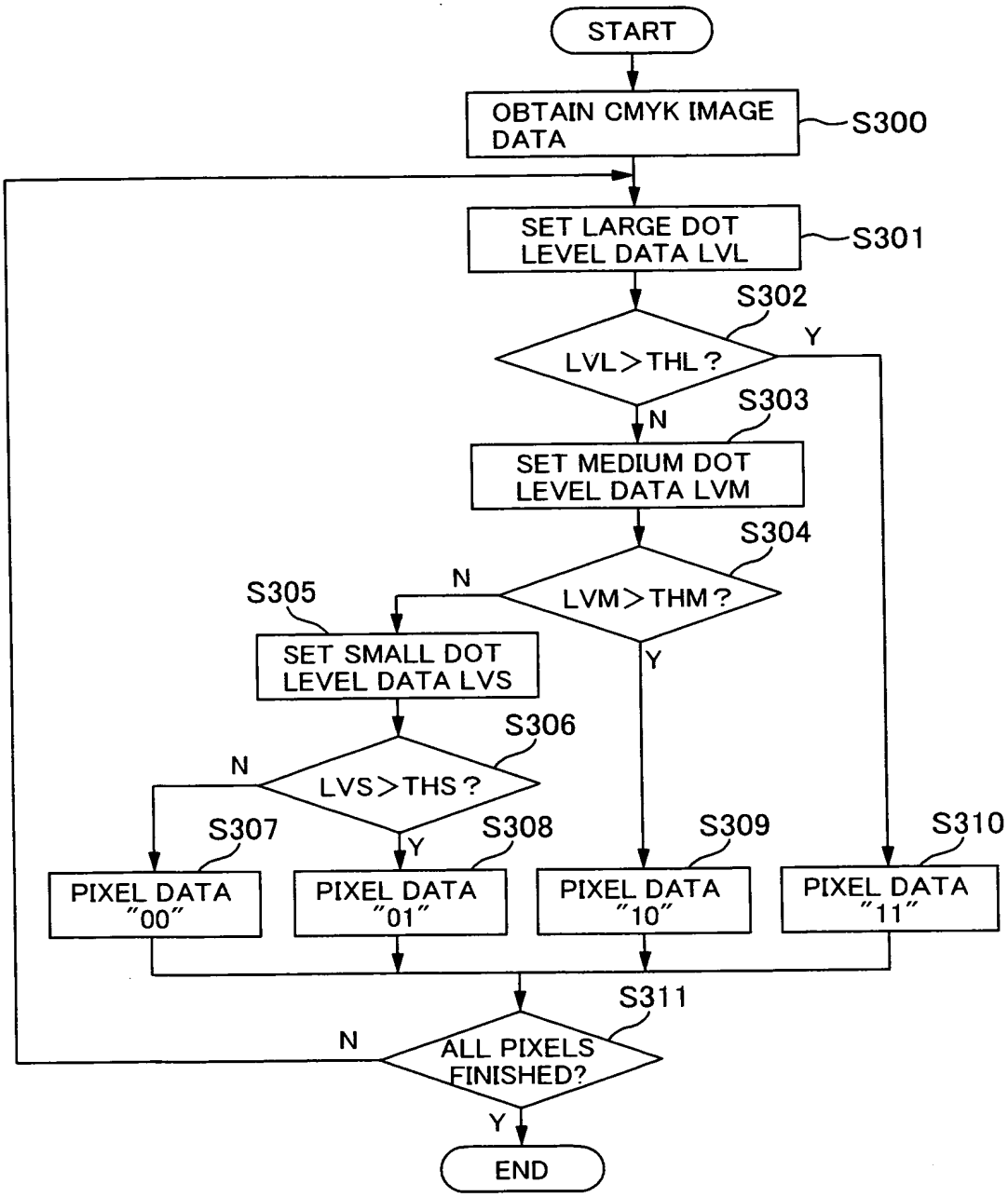

START
OBTAIN CMYK IMAGE DATA
S300
SET LARGE DOT LEVEL DATA LVL
S301
S302
LVL>THL?
Y
N
S303
SET MEDIUM DOT LEVEL DATA LVM
S304
LVM>THM?
N
Y
S305
SET SMALL DOT LEVEL DATA LVS
S306
LVS>THS?
N
Y
S307
S308
S309
S310
PIXEL DATA "00"
PIXEL DATA "01"
PIXEL DATA "10"
PIXEL DATA "11"
S311
ALL PIXELS FINISHED?
N
Y
END

Fig.3

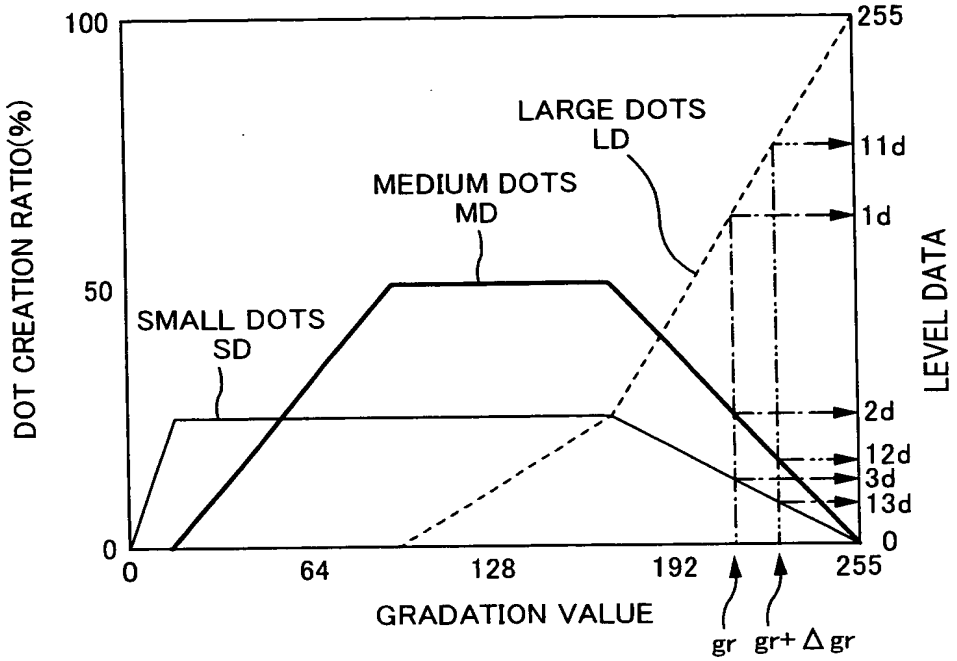

100
50
0
255
DOT CREATION RATIO(%)
LEVEL DATA
LARGE DOTS
LD
MEDIUM DOTS
MD
SMALL DOTS
SD
11d
1d
2d
12d
3d
13d
0
0
64
128
192
255
GRADATION VALUE
gr
gr+Δgr

Fig.4

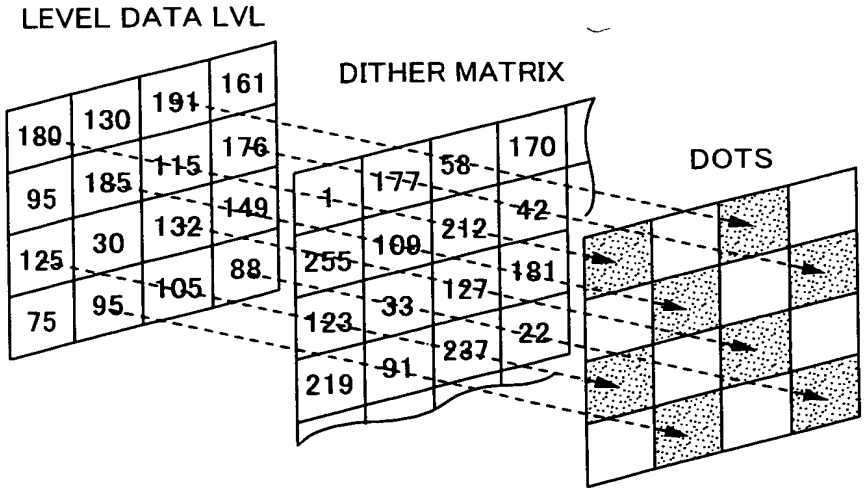

LEVEL DATA LVL
DITHER MATRIX
DOTS
180
130
191
161
95
185
115
176
125
30
132
149
75
95
105
88
1
177
58
170
255
109
212
42
123
33
127
181
219
91
237
22

Fig.5

Fig.6A

TM

1	9	3	11
13	5	15	7
4	12	2	10
16	8	14	6

Fig.6B

UM

16	8	14	6
4	12	2	10
13	5	15	7
1	9	3	11

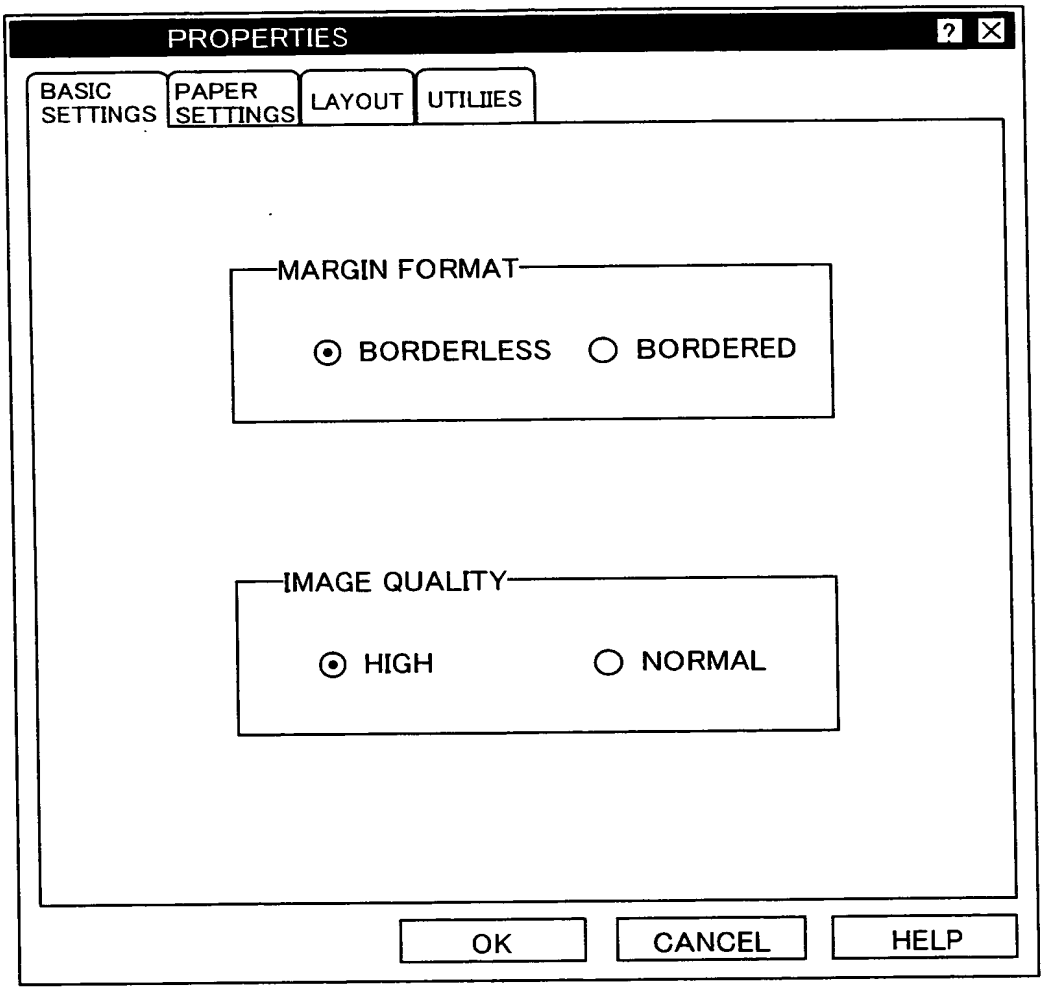

PROPERTIES
BASIC SETTINGS
PAPER SETTINGS
LAYOUT
UTILIIES
MARGIN FORMAT
BORDERLESS
BORDERED
IMAGE QUALITY
HIGH
NORMAL
OK
CANCEL
HELP

Fig.7

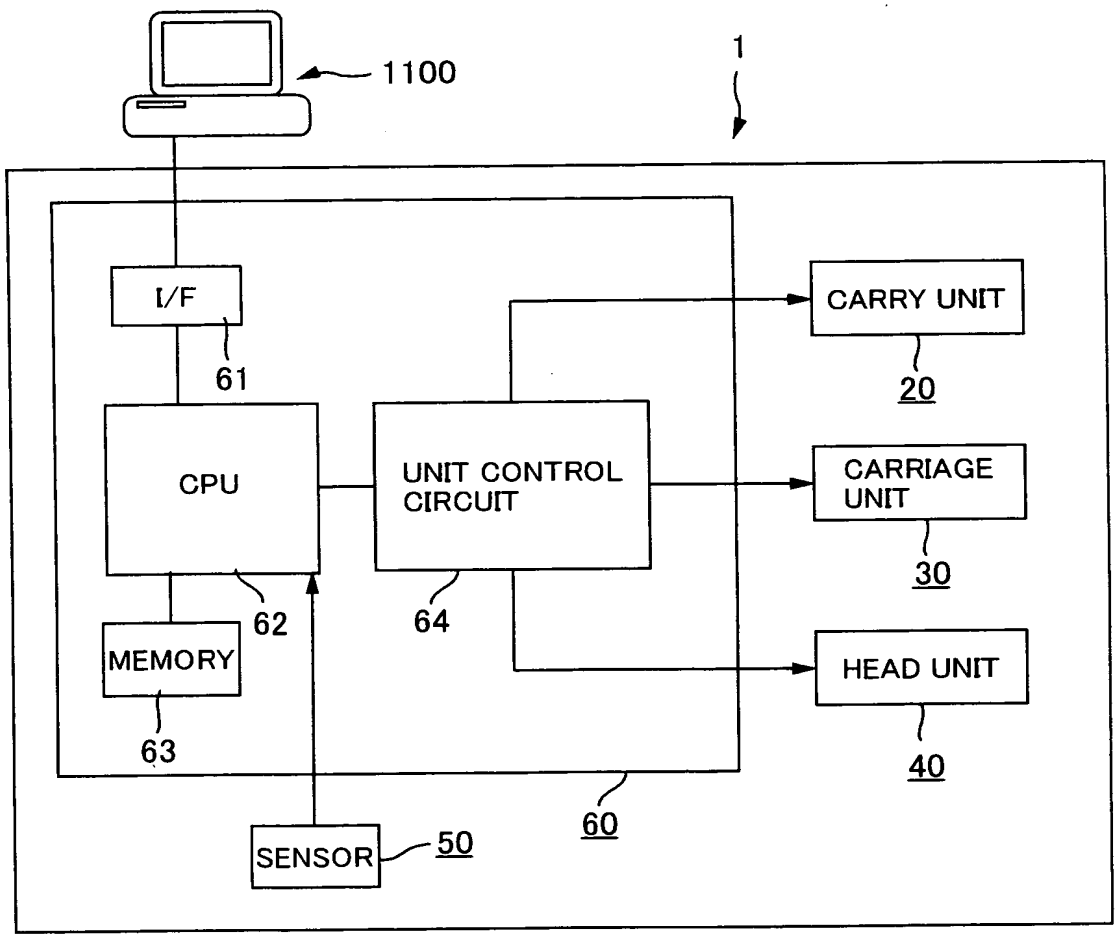

1100
1
I/F
61
CPU
62
MEMORY
63
UNIT CONTROL CIRCUIT
64
CARRY UNIT
20
CARRIAGE UNIT
30
HEAD UNIT
40
60
SENSOR
50

Fig.8

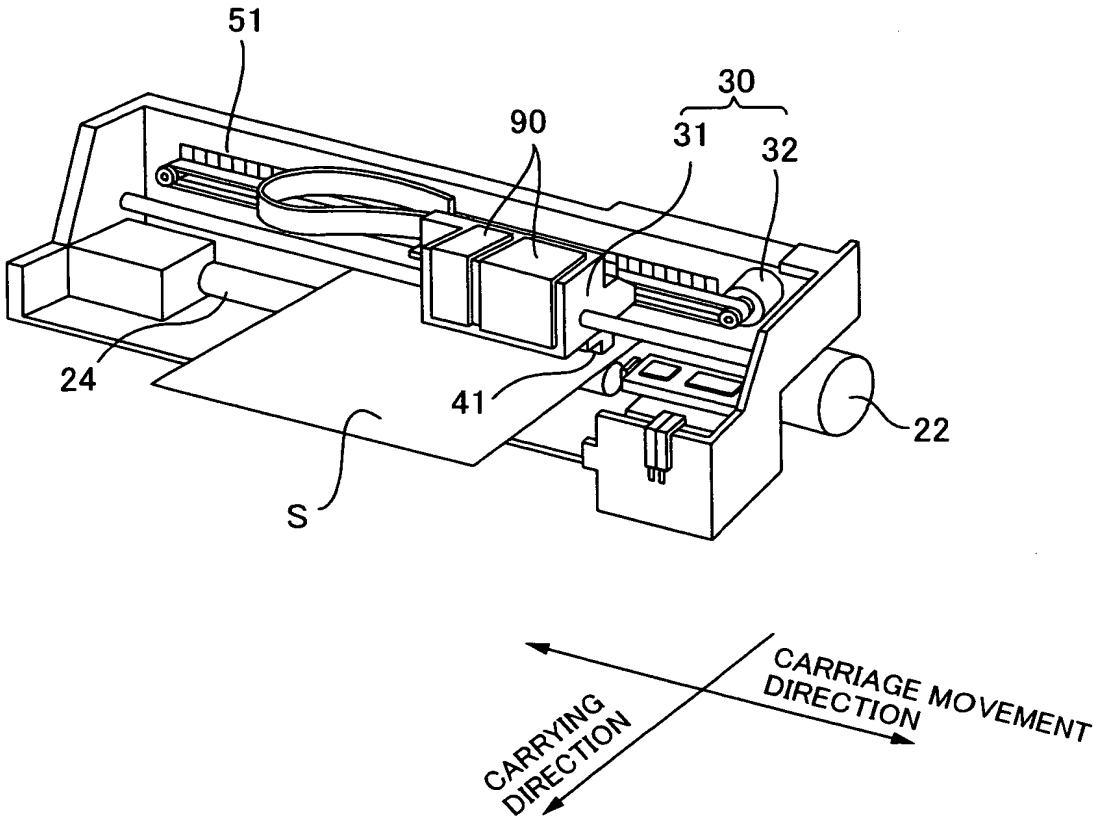

51
30
90
31
32
24
41
22
S
CARRIAGE MOVEMENT DIRECTION
CARRYING DIRECTION

Fig.9

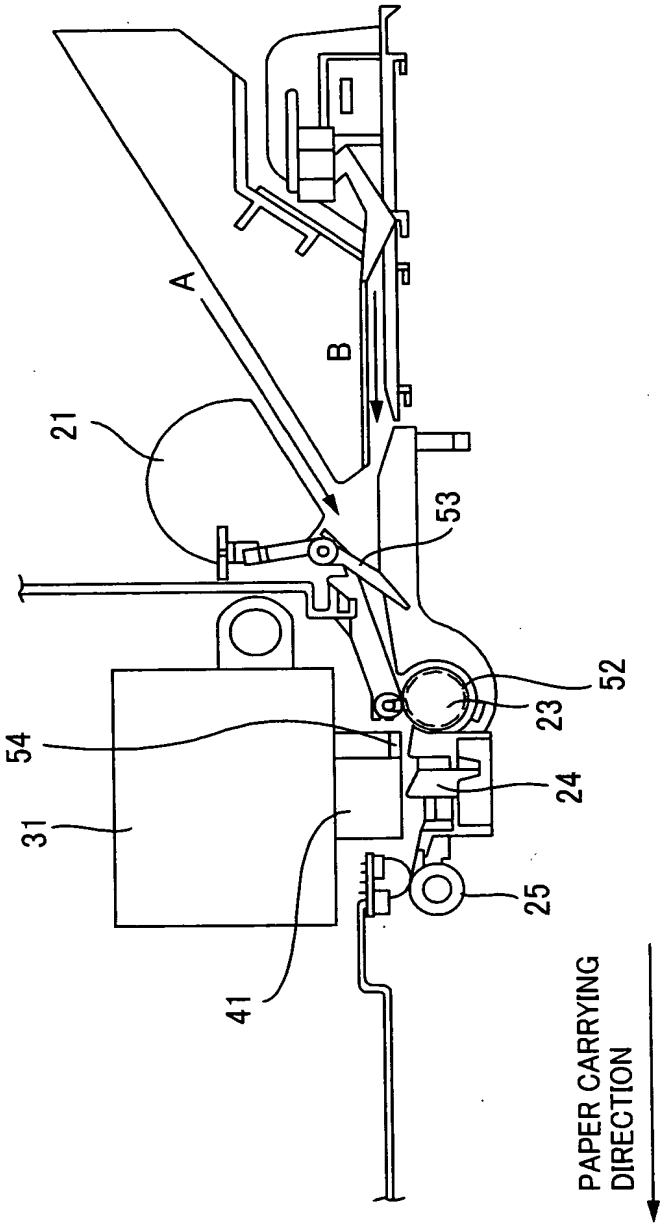


Fig.10

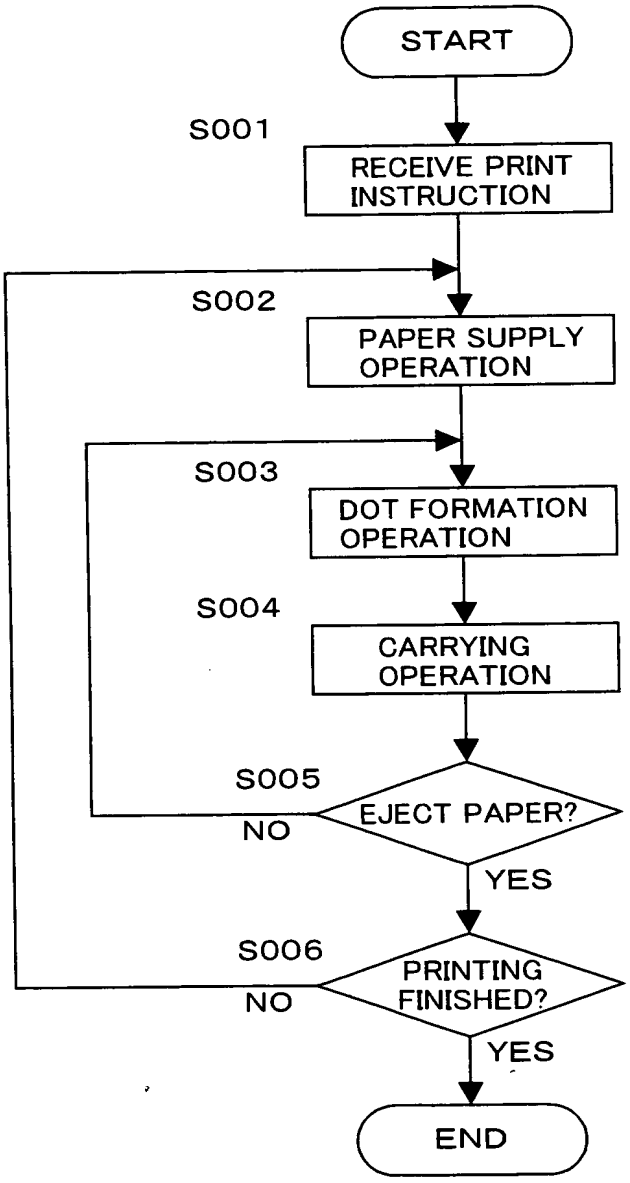

START
S001
RECEIVE PRINT INSTRUCTION
S002
PAPER SUPPLY OPERATION
S003
DOT FORMATION OPERATION
S004
CARRYING OPERATION
S005
EJECT PAPER?
NO
YES
S006
PRINTING FINISHED?
NO
YES
END

Fig.11

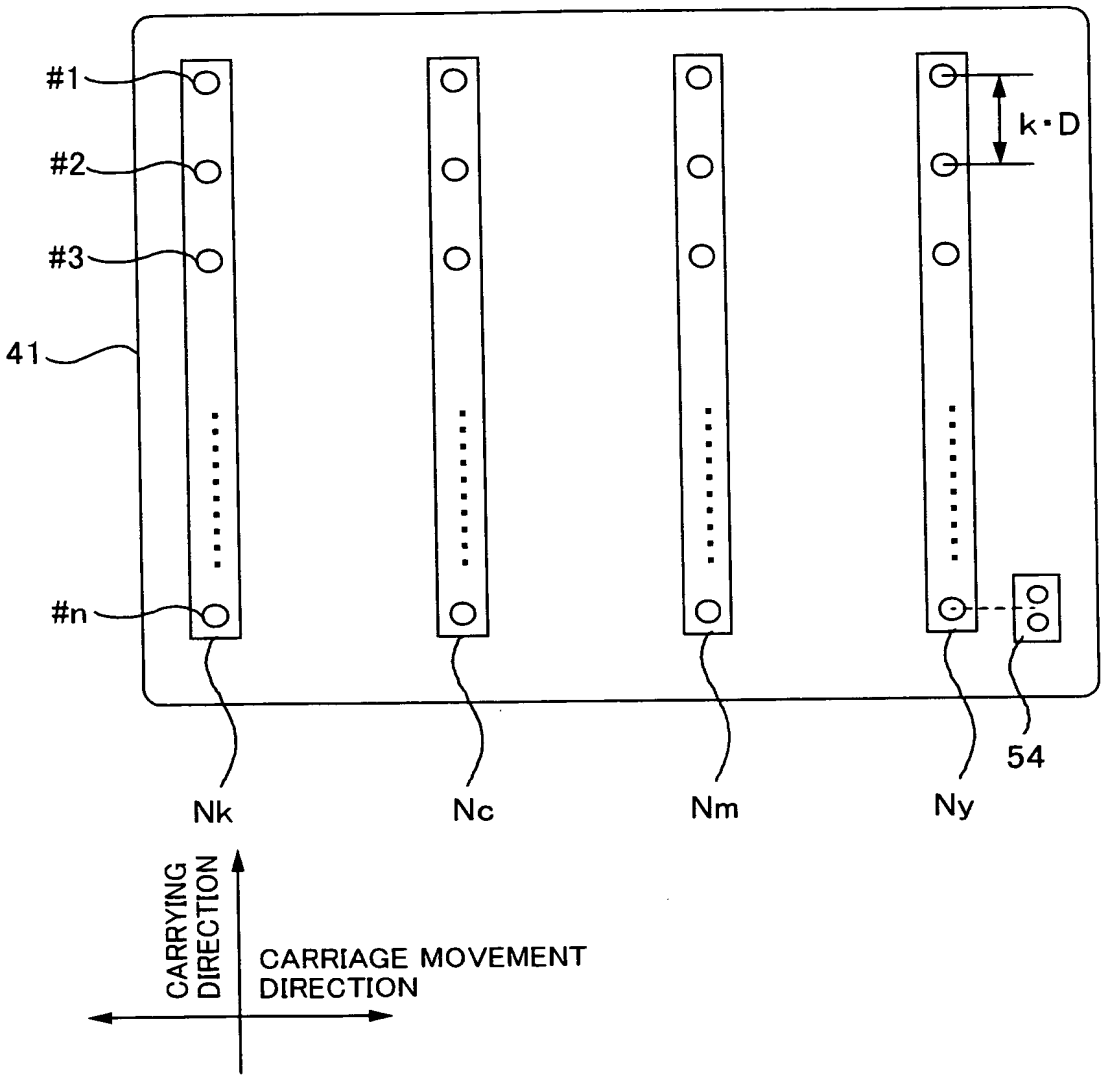

#1
#2
#3
41
#n
k·D
54
Nk
Nc
Nm
Ny
CARRYING DIRECTION
CARRIAGE MOVEMENT DIRECTION

Fig.12

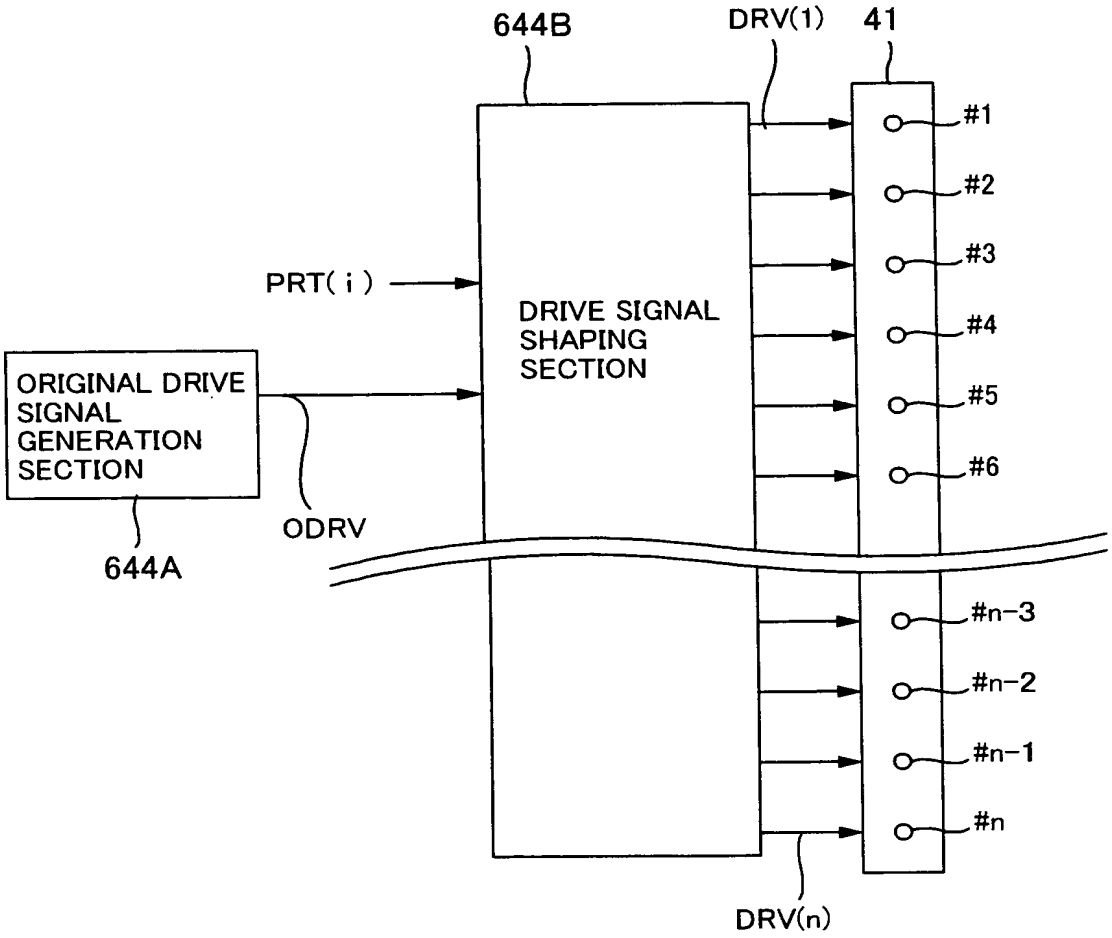

644B
DRV(1)
41
#1
#2
#3
#4
#5
#6
PRT(i)
DRIVE SIGNAL SHAPING SECTION
ORIGINAL DRIVE SIGNAL GENERATION SECTION
ODRV
644A
#n-3
#n-2
#n-1
#n
DRV(n)

Fig.13

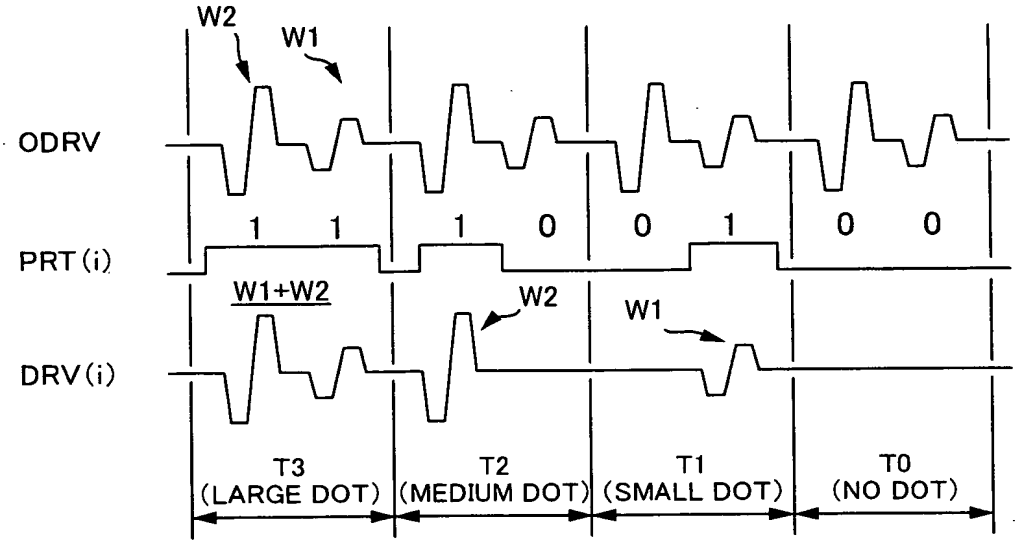


Fig.14

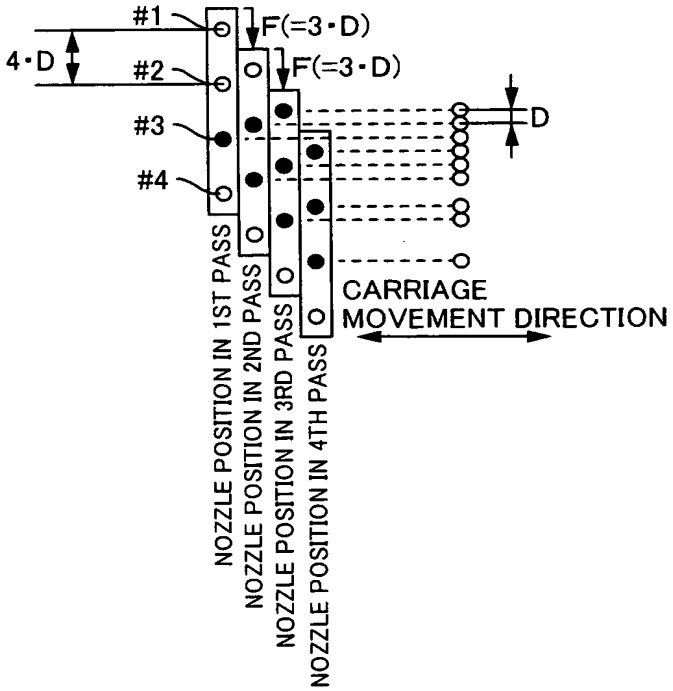


Fig.15A

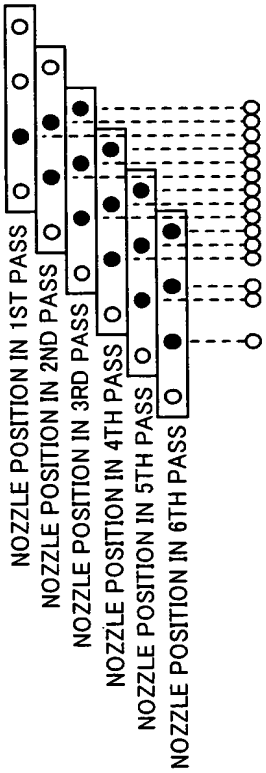


Fig.15B

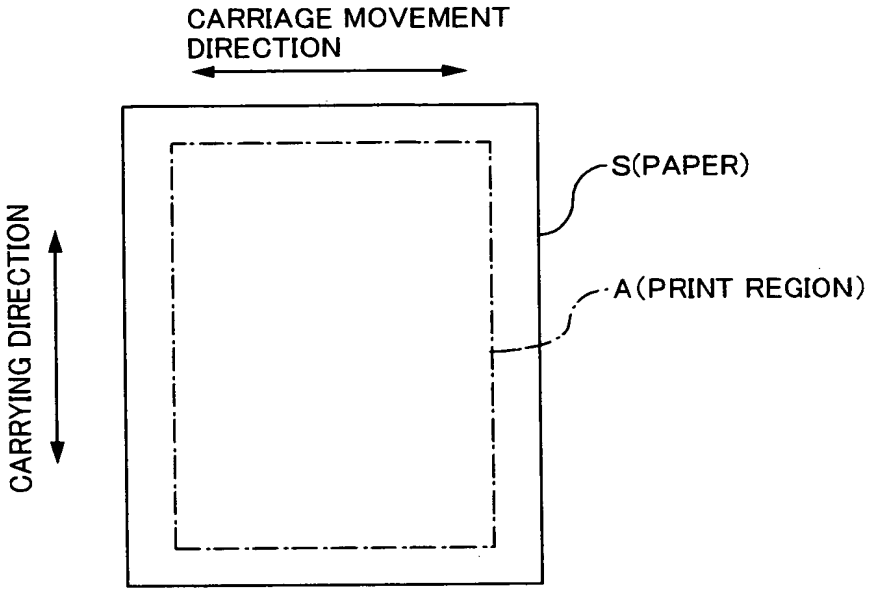

CARRIAGE MOVEMENT DIRECTION
CARRYING DIRECTION
S(PAPER)
A(PRINT REGION)

Fig.16

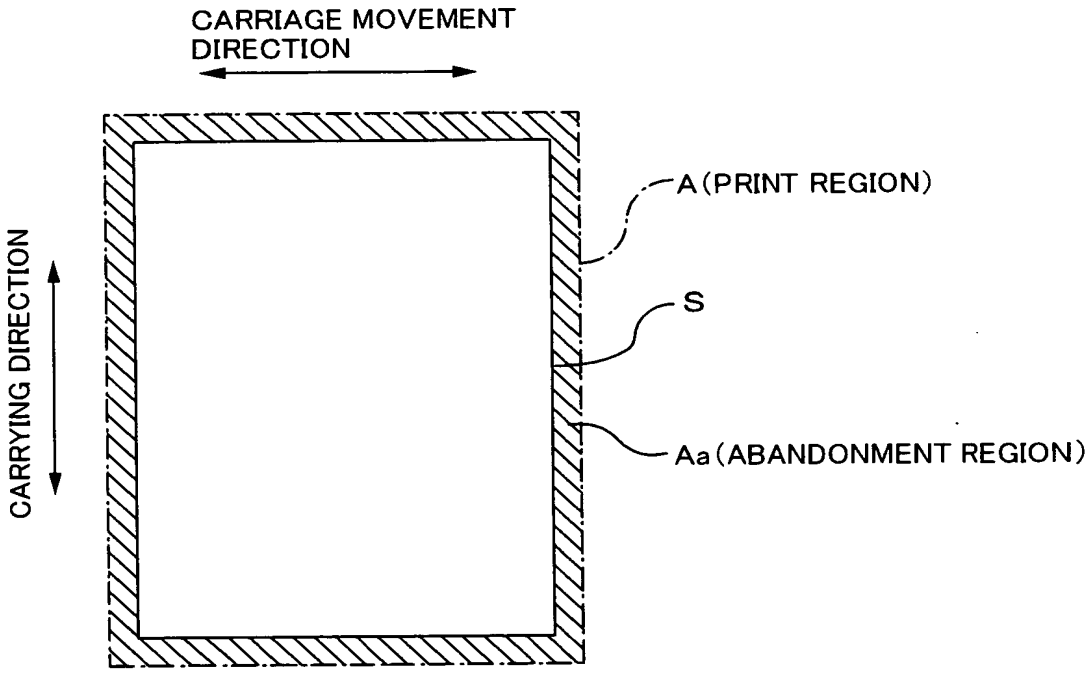

CARRIAGE MOVEMENT DIRECTION
CARRYING DIRECTION
A(PRINT REGION)
S
Aa(ABANDONMENT REGION)

Fig.17

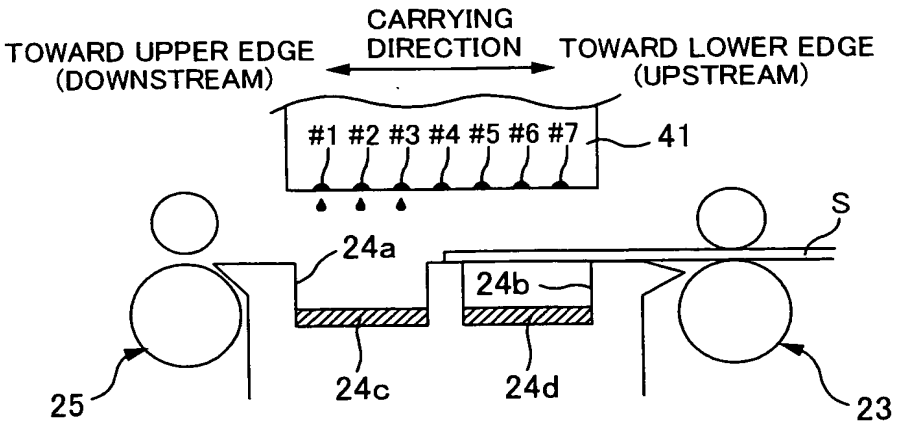


Fig.18A

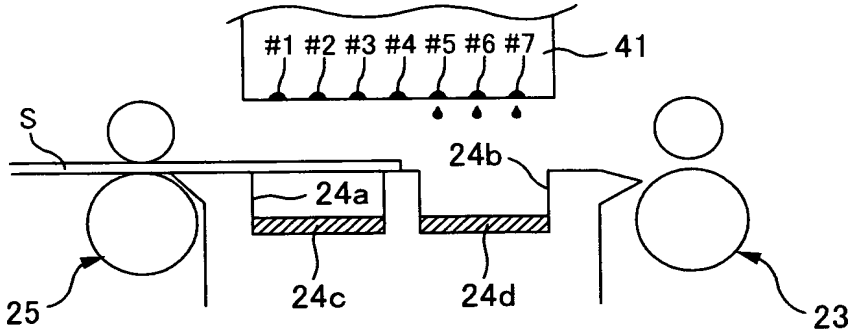


Fig.18B

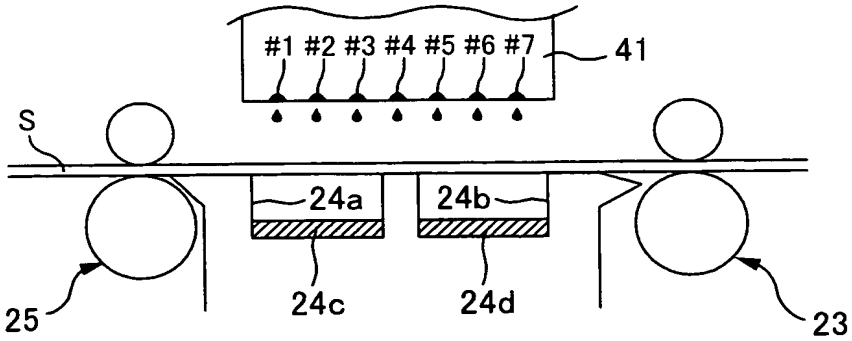


Fig.18C

MARGIN FORMAT MODE	IMAGE QUALITY MODE	PRINT MODE
BORDERLESS	HIGH	FIRST PRINT MODE
	NORMAL	THIRD PRINT MODE
BORDERED	HIGH	SECOND PRINT MODE
	NORMAL	FOURTH PRINT MODE

Fig.19

PRINT MODE	PROCESSING MODE
FIRST PRINT MODE	FIRST UPPER EDGE PROCESSING MODE, FIRST INTERMEDIATE PROCESSING MODE, FIRST LOWER EDGE PROCESSING MODE
SECOND PRINT MODE	FIRST INTERMEDIATE PROCESSING MODE
THIRD PRINT MODE	SECOND LOWER EDGE PROCESSING MODE, SECOND INTERMEDIATE PROCESSING MODE, SECOND LOWER EDGE PROCESSING MODE
FOURTH PRINT MODE	SECOND INTERMEDIATE PROCESSING MODE

Fig.20

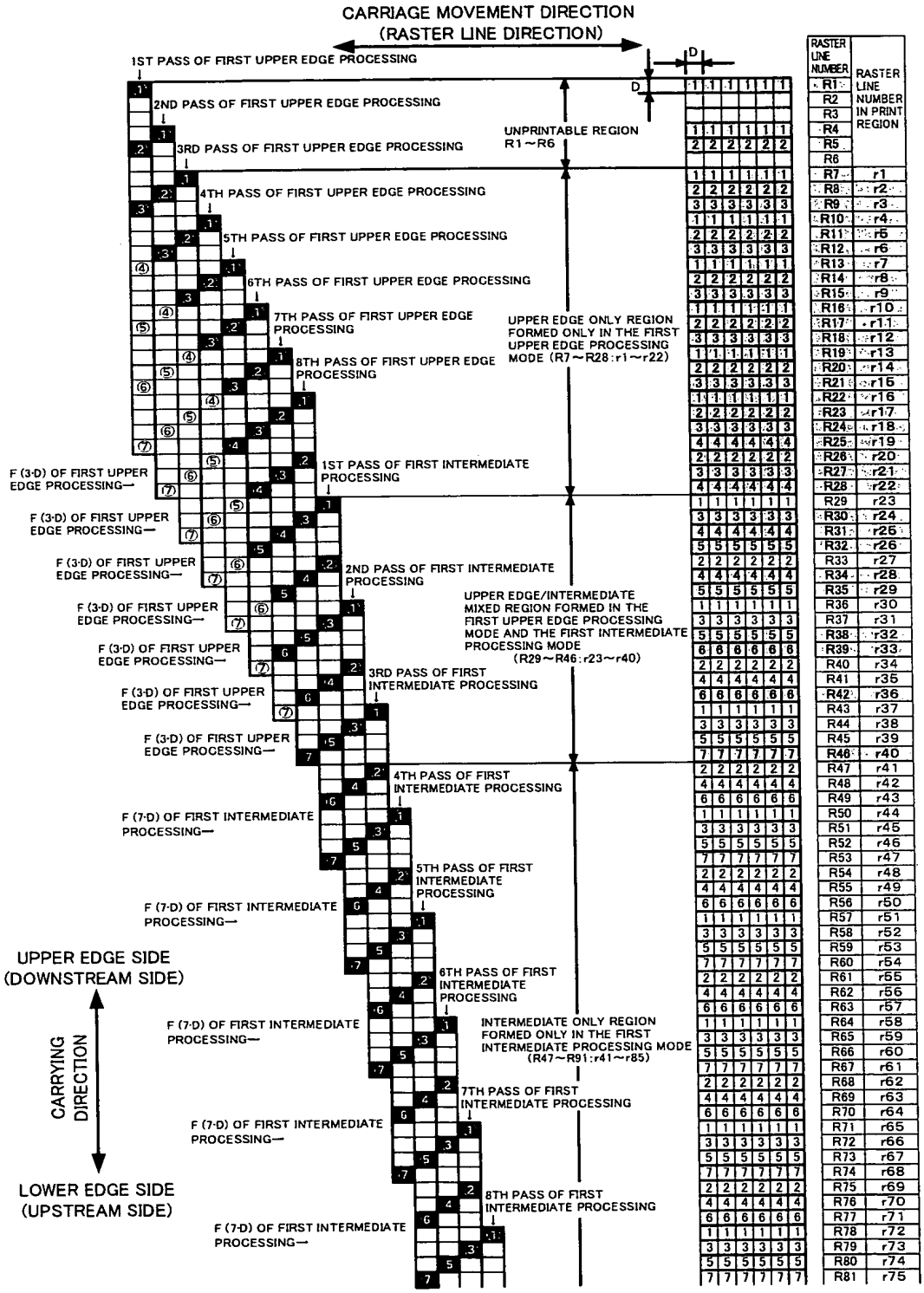
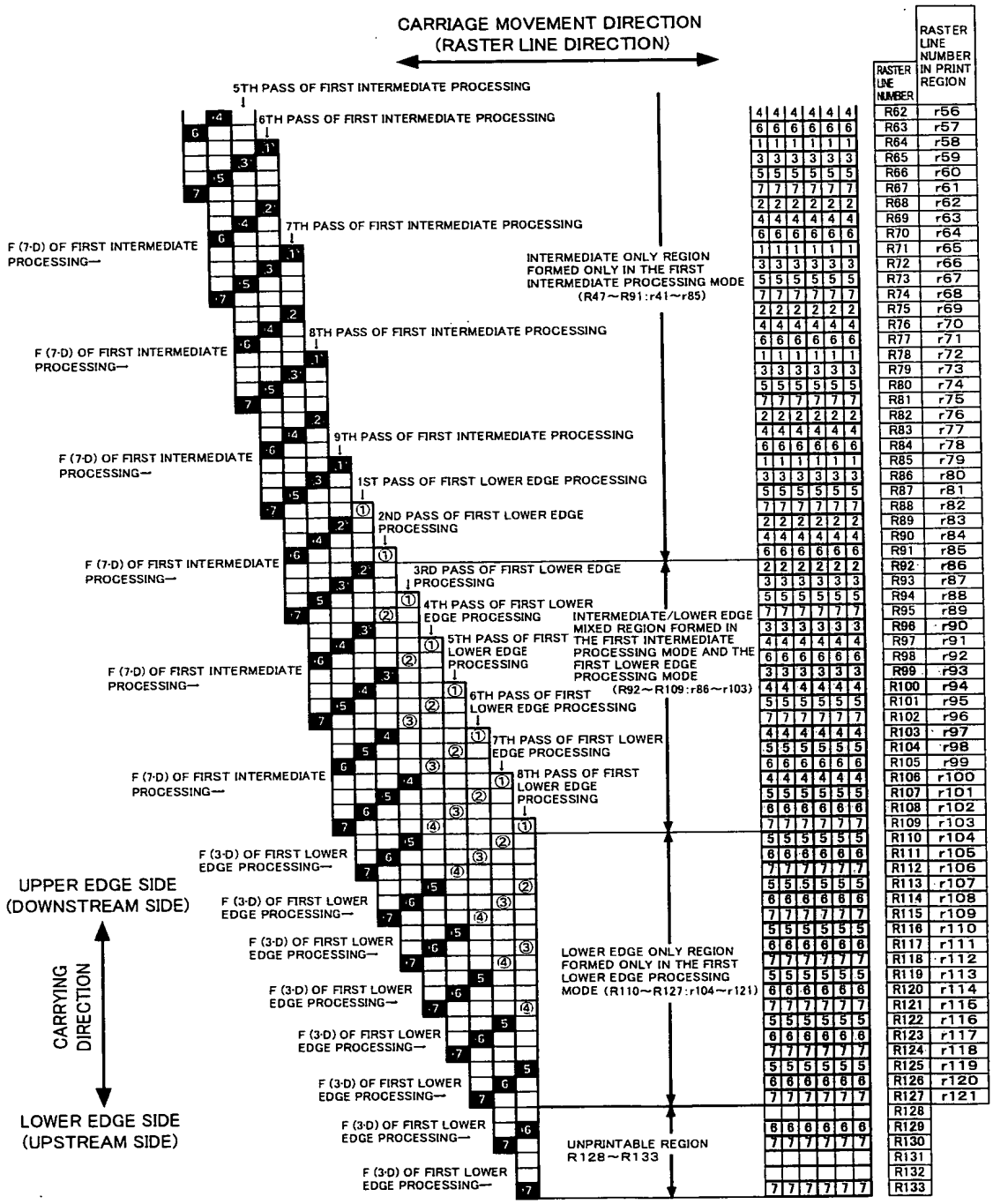

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
D
1ST PASS OF FIRST UPPER EDGE PROCESSING
2ND PASS OF FIRST UPPER EDGE PROCESSING
3RD PASS OF FIRST UPPER EDGE PROCESSING
4TH PASS OF FIRST UPPER EDGE PROCESSING
5TH PASS OF FIRST UPPER EDGE PROCESSING
6TH PASS OF FIRST UPPER EDGE PROCESSING
7TH PASS OF FIRST UPPER EDGE PROCESSING
8TH PASS OF FIRST UPPER EDGE PROCESSING
UNPRINTABLE REGION
R1～R6
UPPER EDGE ONLY REGION FORMED ONLY IN THE FIRST UPPER EDGE PROCESSING MODE (R7～R28:r1～r22)
F (3-D) OF FIRST UPPER EDGE PROCESSING
1ST PASS OF FIRST INTERMEDIATE PROCESSING
2ND PASS OF FIRST INTERMEDIATE PROCESSING
UPPER EDGE/INTERMEDIATE MIXED REGION FORMED IN THE FIRST UPPER EDGE PROCESSING MODE AND THE FIRST INTERMEDIATE PROCESSING MODE (R29～R46:r23～r40)
3RD PASS OF FIRST INTERMEDIATE PROCESSING
4TH PASS OF FIRST INTERMEDIATE PROCESSING
F (7-D) OF FIRST INTERMEDIATE PROCESSING
5TH PASS OF FIRST INTERMEDIATE PROCESSING
6TH PASS OF FIRST INTERMEDIATE PROCESSING
INTERMEDIATE ONLY REGION FORMED ONLY IN THE FIRST INTERMEDIATE PROCESSING MODE (R47～R91:r41～r85)
7TH PASS OF FIRST INTERMEDIATE PROCESSING
8TH PASS OF FIRST INTERMEDIATE PROCESSING
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION
R1 R2 R3 R4 R5 R6 R7 r1 R8 r2 R9 r3 R10 r4 R11 r5 R12 r6 R13 r7 R14 r8 R15 r9 R16 r10 R17 r11 R18 r12 R19 r13 R20 r14 R21 r15 R22 r16 R23 r17 R24 r18 R25 r19 R26 r20 R27 r21 R28 r22 R29 r23 R30 r24 R31 r25 R32 r26 R33 r27 R34 r28 R35 r29 R36 r30 R37 r31 R38 r32 R39 r33 R40 r34 R41 r35 R42 r36 R43 r37 R44 r38 R45 r39 R46 r40 R47 r41 R48 r42 R49 r43 R50 r44 R51 r45 R52 r46 R53 r47 R54 r48 R55 r49 R56 r50 R57 r51 R58 r52 R59 r53 R60 r54 R61 r55 R62 r56 R63 r57 R64 r58 R65 r59 R66 r60 R67 r61 R68 r62 R69 r63 R70 r64 R71 r65 R72 r66 R73 r67 R74 r68 R75 r69 R76 r70 R77 r71 R78 r72 R79 r73 R80 r74 R81 r75

Fig.21A



RASTER LINE NUMBER	RASTER LINE NUMBER IN PRINT REGION
R62	r56
R63	r57
R64	r58
R65	r59
R66	r60
R67	r61
R68	r62
R69	r63
R70	r64
R71	r65
R72	r66
R73	r67
R74	r68
R75	r69
R76	r70
R77	r71
R78	r72
R79	r73
R80	r74
R81	r75
R82	r76
R83	r77
R84	r78
R85	r79
R86	r80
R87	r81
R88	r82
R89	r83
R90	r84
R91	r85
R92	r86
R93	r87
R94	r88
R95	r89
R96	r90
R97	r91
R98	r92
R99	r93
R100	r94
R101	r95
R102	r96
R103	r97
R104	r98
R105	r99
R106	r100
R107	r101
R108	r102
R109	r103
R110	r104
R111	r105
R112	r106
R113	r107
R114	r108
R115	r109
R116	r110
R117	r111
R118	r112
R119	r113
R120	r114
R121	r115
R122	r116
R123	r117
R124	r118
R125	r119
R126	r120
R127	r121
R128	
R129	
R130	
R131	
R132	
R133	

Fig.21B

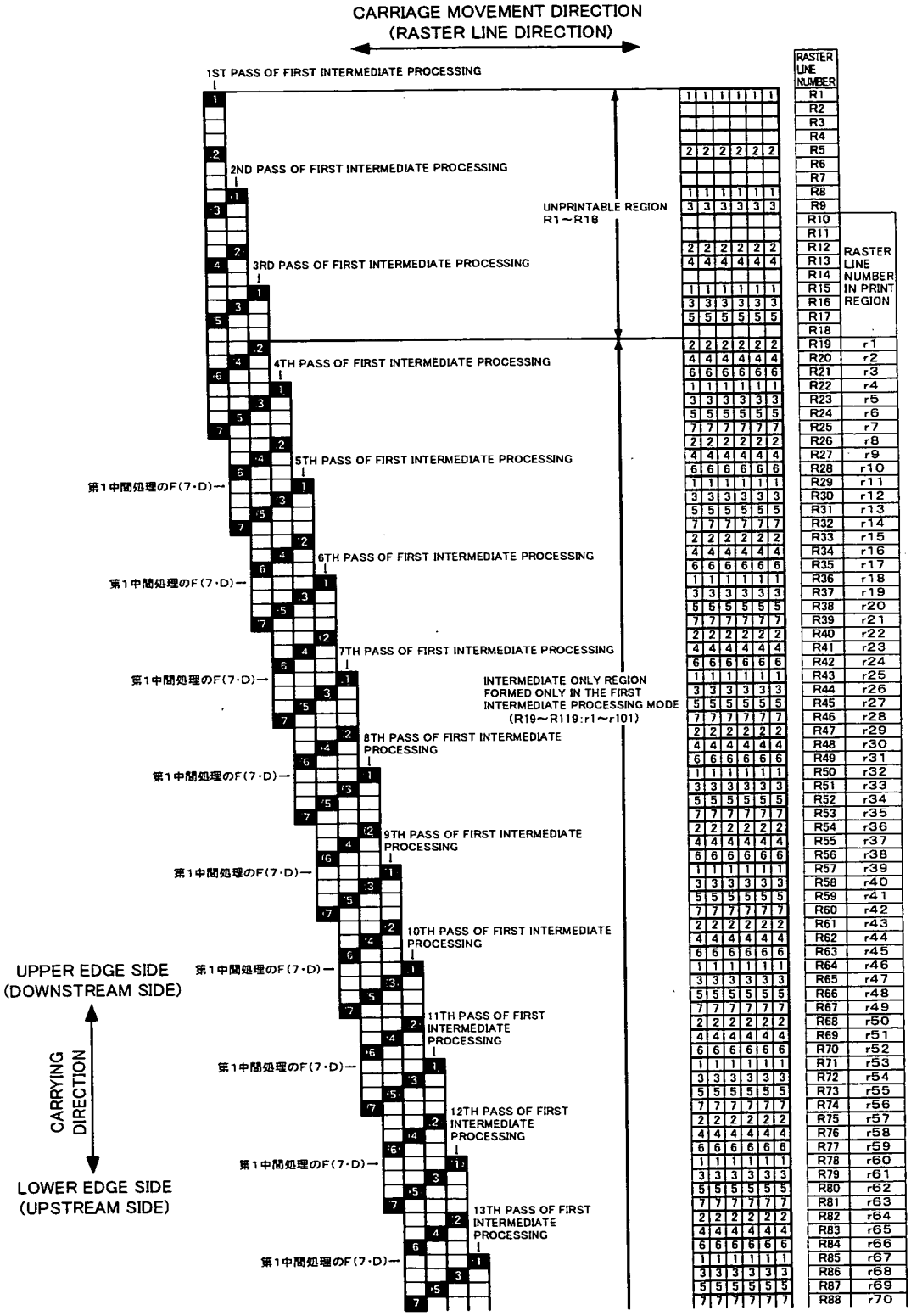

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
1ST PASS OF FIRST INTERMEDIATE PROCESSING
2ND PASS OF FIRST INTERMEDIATE PROCESSING
3RD PASS OF FIRST INTERMEDIATE PROCESSING
4TH PASS OF FIRST INTERMEDIATE PROCESSING
5TH PASS OF FIRST INTERMEDIATE PROCESSING
6TH PASS OF FIRST INTERMEDIATE PROCESSING
7TH PASS OF FIRST INTERMEDIATE PROCESSING
8TH PASS OF FIRST INTERMEDIATE PROCESSING
9TH PASS OF FIRST INTERMEDIATE PROCESSING
10TH PASS OF FIRST INTERMEDIATE PROCESSING
11TH PASS OF FIRST INTERMEDIATE PROCESSING
12TH PASS OF FIRST INTERMEDIATE PROCESSING
13TH PASS OF FIRST INTERMEDIATE PROCESSING
第1中間処理のF(7・D)→
UNPRINTABLE REGION
R1～R18
INTERMEDIATE ONLY REGION
FORMED ONLY IN THE FIRST
INTERMEDIATE PROCESSING MODE
(R19～R119:r1～r101)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION

Fig.22A

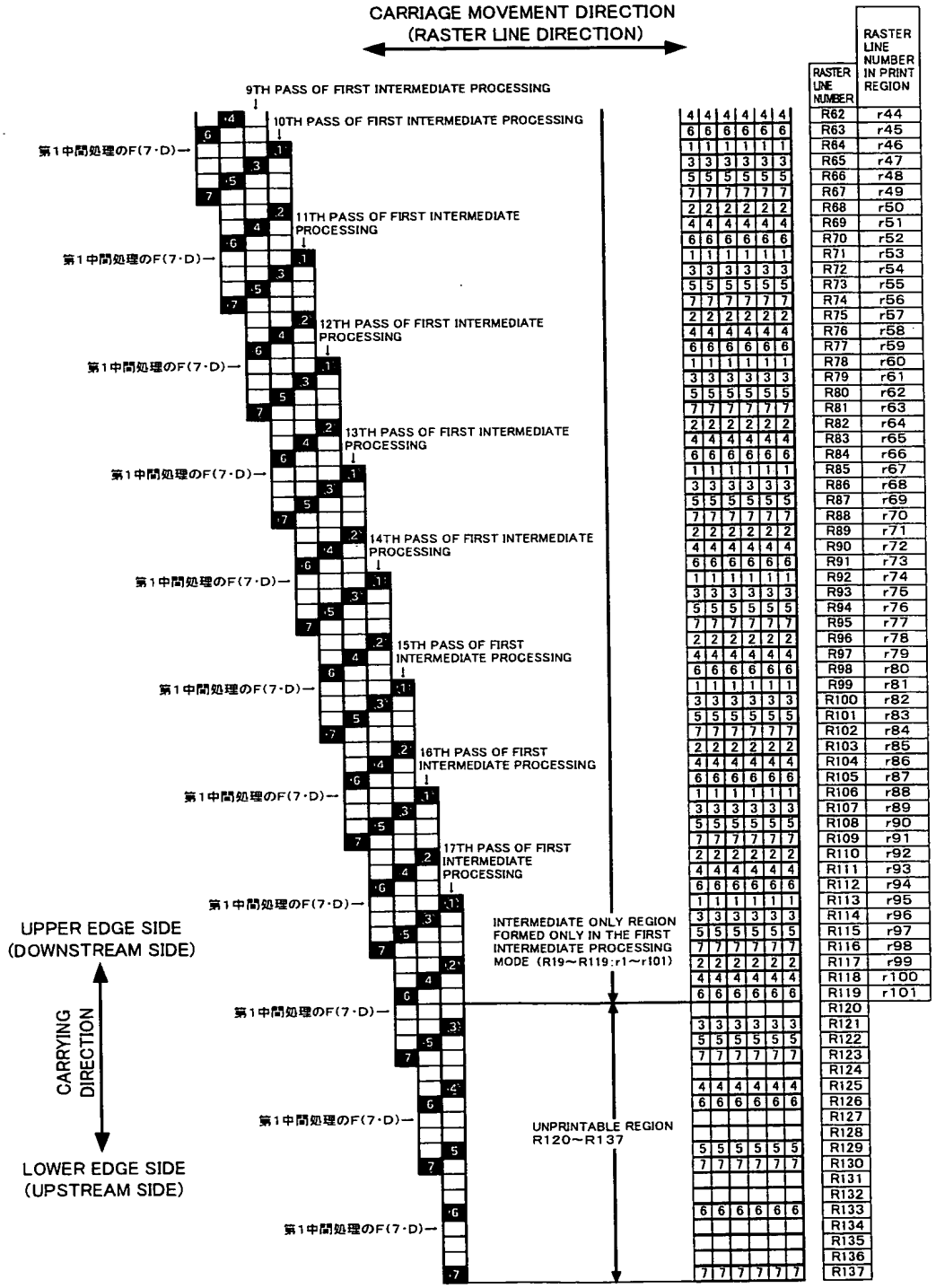

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
9TH PASS OF FIRST INTERMEDIATE PROCESSING
10TH PASS OF FIRST INTERMEDIATE PROCESSING
11TH PASS OF FIRST INTERMEDIATE PROCESSING
12TH PASS OF FIRST INTERMEDIATE PROCESSING
13TH PASS OF FIRST INTERMEDIATE PROCESSING
14TH PASS OF FIRST INTERMEDIATE PROCESSING
15TH PASS OF FIRST INTERMEDIATE PROCESSING
16TH PASS OF FIRST INTERMEDIATE PROCESSING
17TH PASS OF FIRST INTERMEDIATE PROCESSING
第1中間処理のF(7・D)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
INTERMEDIATE ONLY REGION FORMED ONLY IN THE FIRST INTERMEDIATE PROCESSING MODE (R19~R119:r1~r101)
UNPRINTABLE REGION
R120~R137
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION

Fig.22B

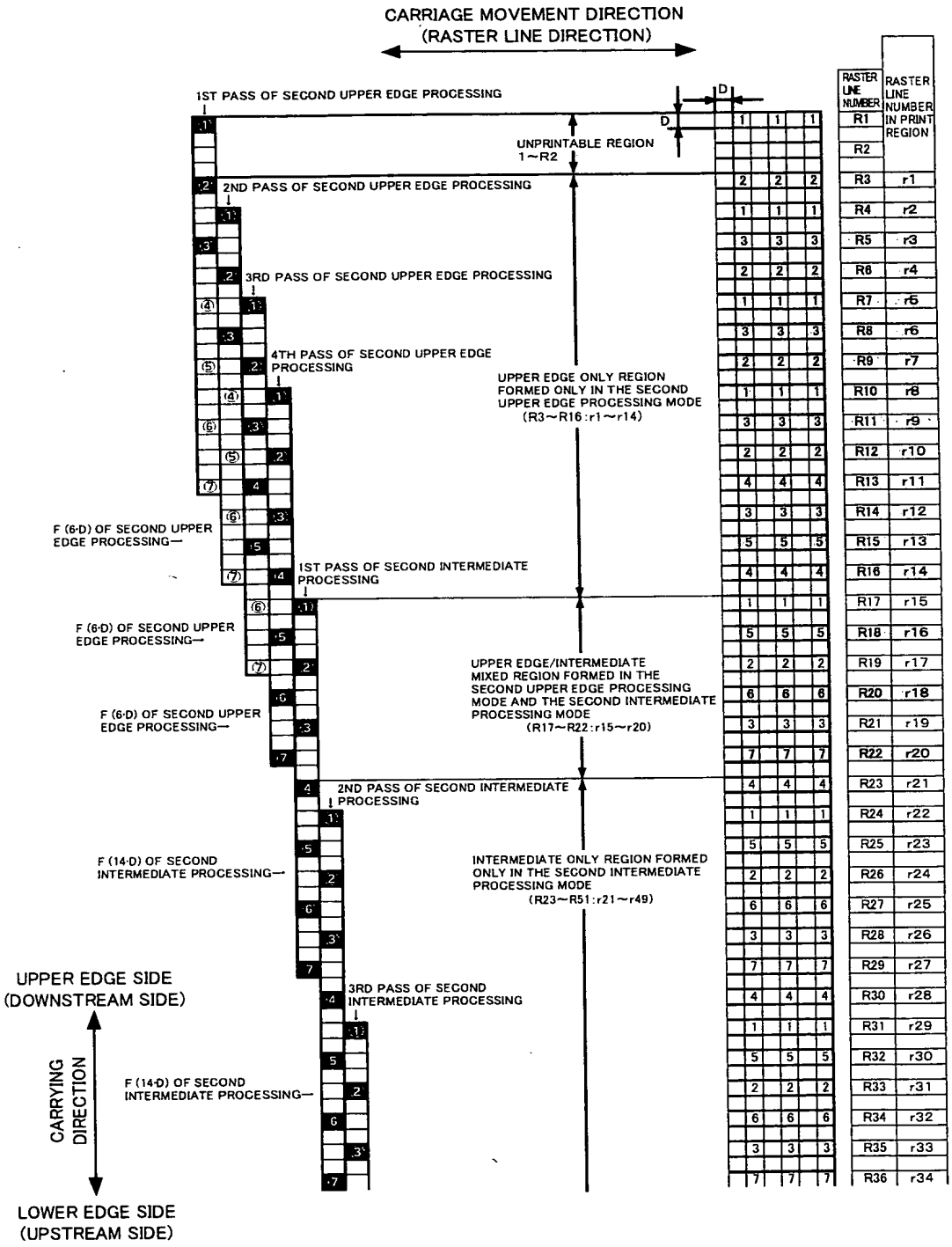

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
1ST PASS OF SECOND UPPER EDGE PROCESSING
D
UNPRINTABLE REGION
1~R2
2ND PASS OF SECOND UPPER EDGE PROCESSING
3RD PASS OF SECOND UPPER EDGE PROCESSING
4TH PASS OF SECOND UPPER EDGE PROCESSING
UPPER EDGE ONLY REGION FORMED ONLY IN THE SECOND UPPER EDGE PROCESSING MODE
(R3~R16:r1~r14)
F (6·D) OF SECOND UPPER EDGE PROCESSING
1ST PASS OF SECOND INTERMEDIATE PROCESSING
F (6·D) OF SECOND UPPER EDGE PROCESSING
UPPER EDGE/INTERMEDIATE MIXED REGION FORMED IN THE SECOND UPPER EDGE PROCESSING MODE AND THE SECOND INTERMEDIATE PROCESSING MODE
(R17~R22:r15~r20)
F (6·D) OF SECOND UPPER EDGE PROCESSING
2ND PASS OF SECOND INTERMEDIATE PROCESSING
F (14·D) OF SECOND INTERMEDIATE PROCESSING
INTERMEDIATE ONLY REGION FORMED ONLY IN THE SECOND INTERMEDIATE PROCESSING MODE
(R23~R51:r21~r49)
3RD PASS OF SECOND INTERMEDIATE PROCESSING
F (14·D) OF SECOND INTERMEDIATE PROCESSING
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION
R1
R2
R3 r1
R4 r2
R5 r3
R6 r4
R7 r5
R8 r6
R9 r7
R10 r8
R11 r9
R12 r10
R13 r11
R14 r12
R15 r13
R16 r14
R17 r15
R18 r16
R19 r17
R20 r18
R21 r19
R22 r20
R23 r21
R24 r22
R25 r23
R26 r24
R27 r25
R28 r26
R29 r27
R30 r28
R31 r29
R32 r30
R33 r31
R34 r32
R35 r33
R36 r34

Fig.23A

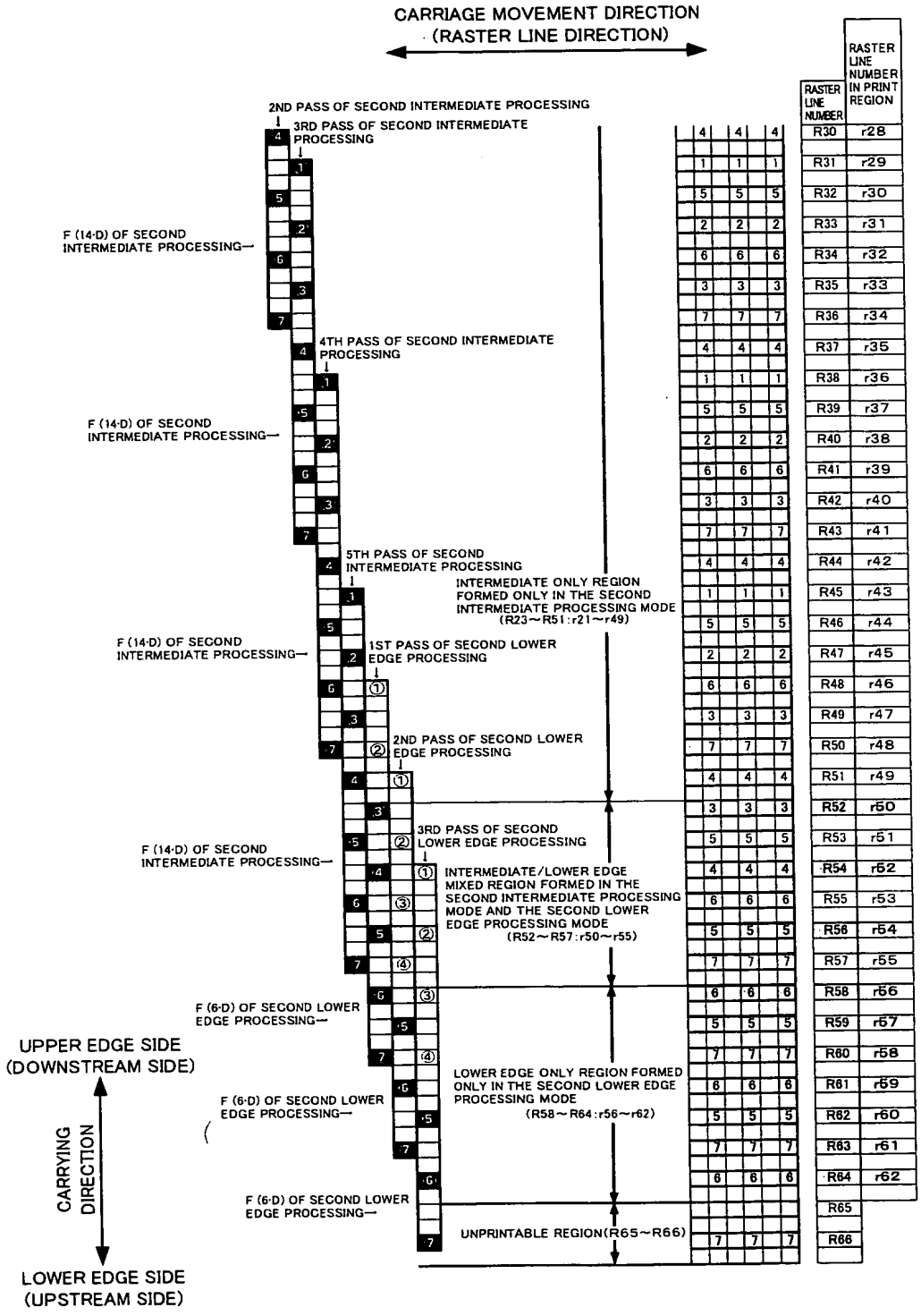

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION
2ND PASS OF SECOND INTERMEDIATE PROCESSING
3RD PASS OF SECOND INTERMEDIATE PROCESSING
F (14·D) OF SECOND INTERMEDIATE PROCESSING
4TH PASS OF SECOND INTERMEDIATE PROCESSING
F (14·D) OF SECOND INTERMEDIATE PROCESSING
5TH PASS OF SECOND INTERMEDIATE PROCESSING
INTERMEDIATE ONLY REGION FORMED ONLY IN THE SECOND INTERMEDIATE PROCESSING MODE (R23~R51 : r21~r49)
F (14·D) OF SECOND INTERMEDIATE PROCESSING
1ST PASS OF SECOND LOWER EDGE PROCESSING
2ND PASS OF SECOND LOWER EDGE PROCESSING
3RD PASS OF SECOND LOWER EDGE PROCESSING
F (14·D) OF SECOND INTERMEDIATE PROCESSING
INTERMEDIATE/LOWER EDGE MIXED REGION FORMED IN THE SECOND INTERMEDIATE PROCESSING MODE AND THE SECOND LOWER EDGE PROCESSING MODE (R52~R57 : r50~r55)
F (6·D) OF SECOND LOWER EDGE PROCESSING
LOWER EDGE ONLY REGION FORMED ONLY IN THE SECOND LOWER EDGE PROCESSING MODE (R58~R64 : r56~r62)
F (6·D) OF SECOND LOWER EDGE PROCESSING
F (6·D) OF SECOND LOWER EDGE PROCESSING
UNPRINTABLE REGION(R65~R66)
UPPER EDGE SIDE (DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE (UPSTREAM SIDE)
R30 r28
R31 r29
R32 r30
R33 r31
R34 r32
R35 r33
R36 r34
R37 r35
R38 r36
R39 r37
R40 r38
R41 r39
R42 r40
R43 r41
R44 r42
R45 r43
R46 r44
R47 r45
R48 r46
R49 r47
R50 r48
R51 r49
R52 r50
R53 r51
R54 r52
R55 r53
R56 r54
R57 r55
R58 r56
R59 r57
R60 r58
R61 r59
R62 r60
R63 r61
R64 r62
R65
R66

Fig.23B

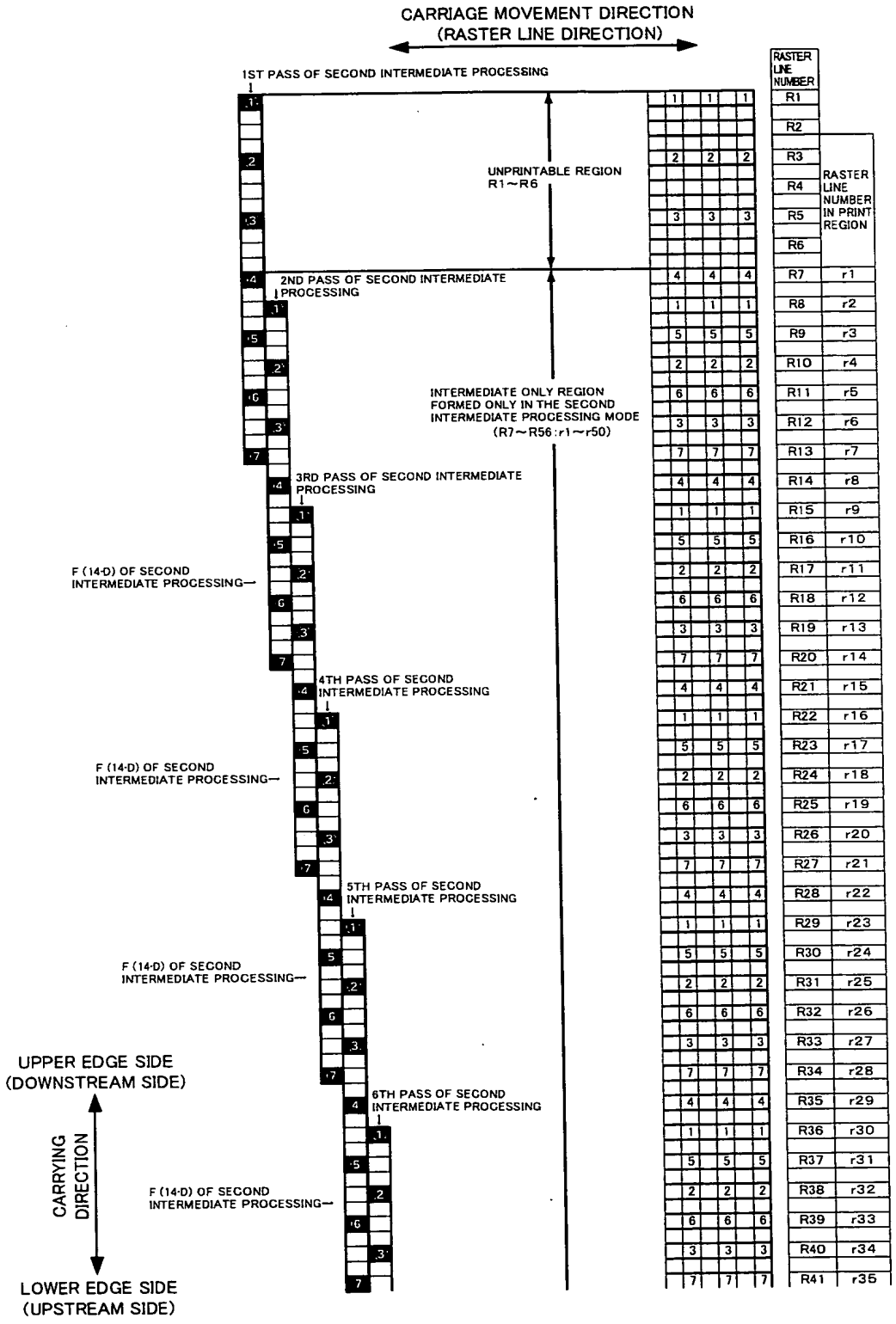

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
1ST PASS OF SECOND INTERMEDIATE PROCESSING
UNPRINTABLE REGION
R1~R6
2ND PASS OF SECOND INTERMEDIATE PROCESSING
INTERMEDIATE ONLY REGION
FORMED ONLY IN THE SECOND
INTERMEDIATE PROCESSING MODE
(R7~R56 : r1~r50)
3RD PASS OF SECOND INTERMEDIATE PROCESSING
F (14-D) OF SECOND INTERMEDIATE PROCESSING
4TH PASS OF SECOND INTERMEDIATE PROCESSING
F (14-D) OF SECOND INTERMEDIATE PROCESSING
5TH PASS OF SECOND INTERMEDIATE PROCESSING
F (14-D) OF SECOND INTERMEDIATE PROCESSING
6TH PASS OF SECOND INTERMEDIATE PROCESSING
F (14-D) OF SECOND INTERMEDIATE PROCESSING
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION
R1 R2 R3 R4 R5 R6 R7 r1 R8 r2 R9 r3 R10 r4 R11 r5 R12 r6 R13 r7 R14 r8 R15 r9 R16 r10 R17 r11 R18 r12 R19 r13 R20 r14 R21 r15 R22 r16 R23 r17 R24 r18 R25 r19 R26 r20 R27 r21 R28 r22 R29 r23 R30 r24 R31 r25 R32 r26 R33 r27 R34 r28 R35 r29 R36 r30 R37 r31 R38 r32 R39 r33 R40 r34 R41 r35

Fig.24A

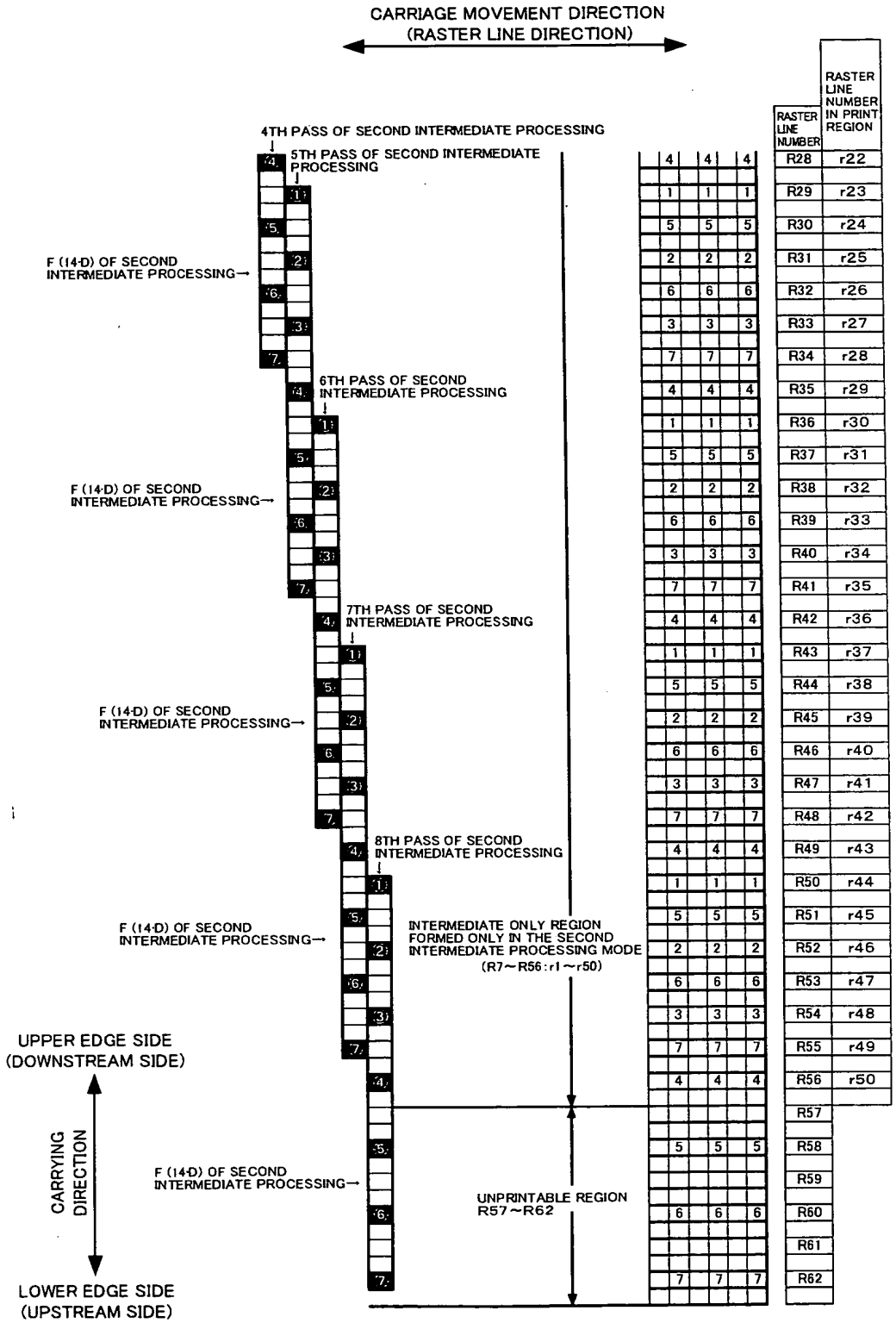

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
4TH PASS OF SECOND INTERMEDIATE PROCESSING
5TH PASS OF SECOND INTERMEDIATE PROCESSING
6TH PASS OF SECOND INTERMEDIATE PROCESSING
7TH PASS OF SECOND INTERMEDIATE PROCESSING
8TH PASS OF SECOND INTERMEDIATE PROCESSING
F (14-D) OF SECOND INTERMEDIATE PROCESSING→
INTERMEDIATE ONLY REGION FORMED ONLY IN THE SECOND INTERMEDIATE PROCESSING MODE (R7~R56 : r1~r50)
UNPRINTABLE REGION R57~R62
UPPER EDGE SIDE (DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE (UPSTREAM SIDE)
RASTER LINE NUMBER
RASTER LINE NUMBER IN PRINT REGION
R28 r22
R29 r23
R30 r24
R31 r25
R32 r26
R33 r27
R34 r28
R35 r29
R36 r30
R37 r31
R38 r32
R39 r33
R40 r34
R41 r35
R42 r36
R43 r37
R44 r38
R45 r39
R46 r40
R47 r41
R48 r42
R49 r43
R50 r44
R51 r45
R52 r46
R53 r47
R54 r48
R55 r49
R56 r50
R57
R58
R59
R60
R61
R62

Fig.24B

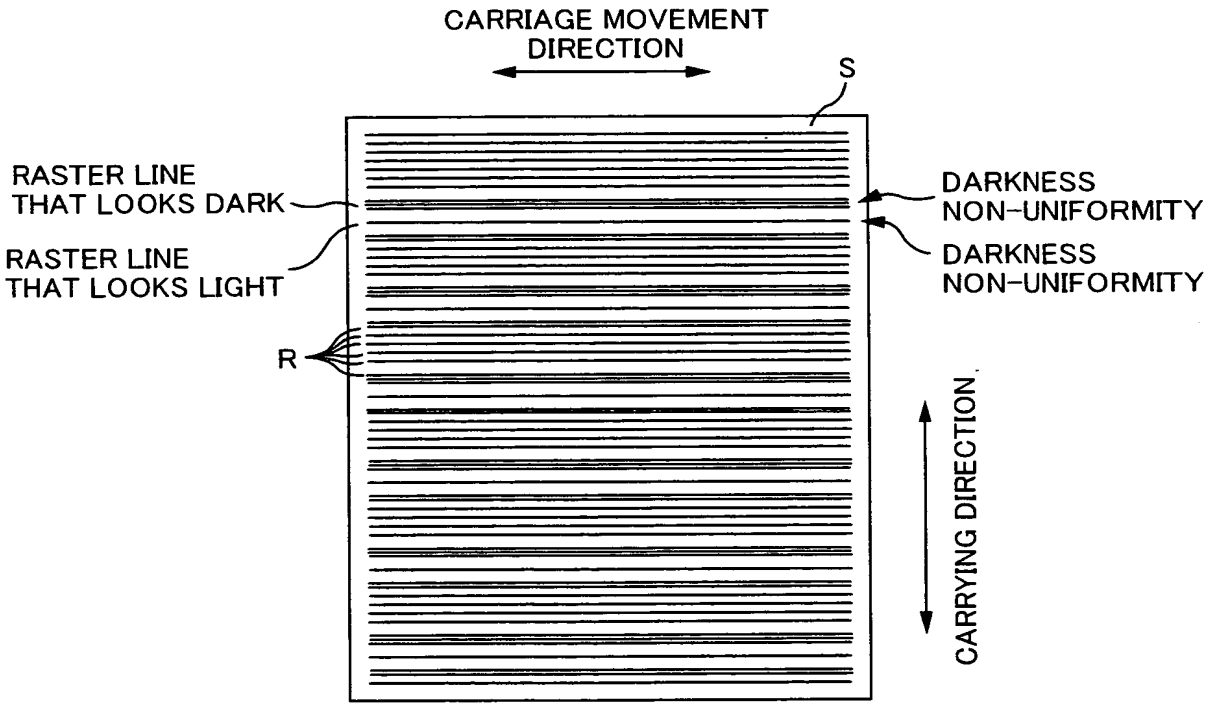

CARRIAGE MOVEMENT DIRECTION
S
RASTER LINE THAT LOOKS DARK
RASTER LINE THAT LOOKS LIGHT
R
DARKNESS NON-UNIFORMITY
DARKNESS NON-UNIFORMITY
CARRYING DIRECTION

Fig.25

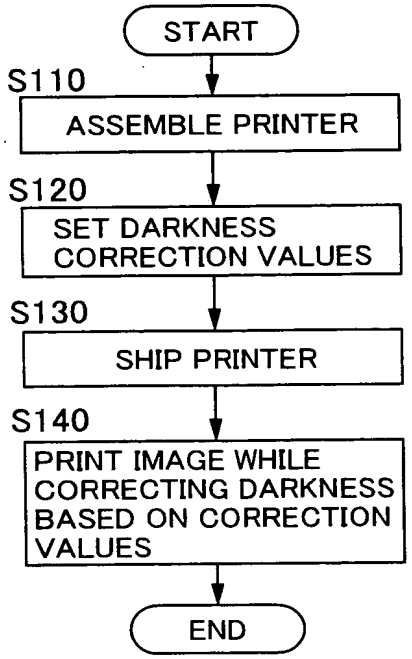

START
S110
ASSEMBLE PRINTER
S120
SET DARKNESS CORRECTION VALUES
S130
SHIP PRINTER
S140
PRINT IMAGE WHILE CORRECTING DARKNESS BASED ON CORRECTION VALUES
END

Fig.26

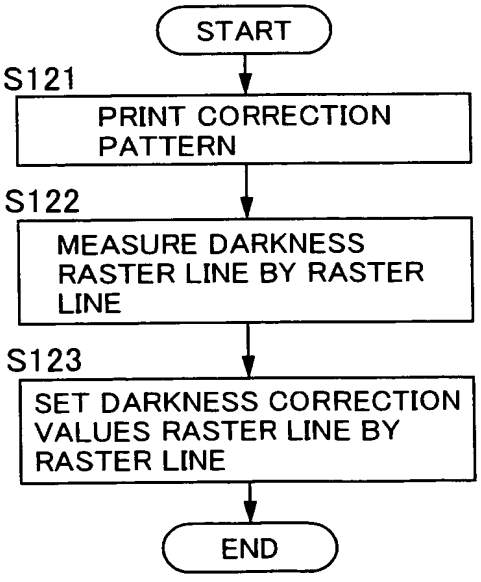

START
S121
PRINT CORRECTION PATTERN
S122
MEASURE DARKNESS RASTER LINE BY RASTER LINE
S123
SET DARKNESS CORRECTION VALUES RASTER LINE BY RASTER LINE
END

Fig.27

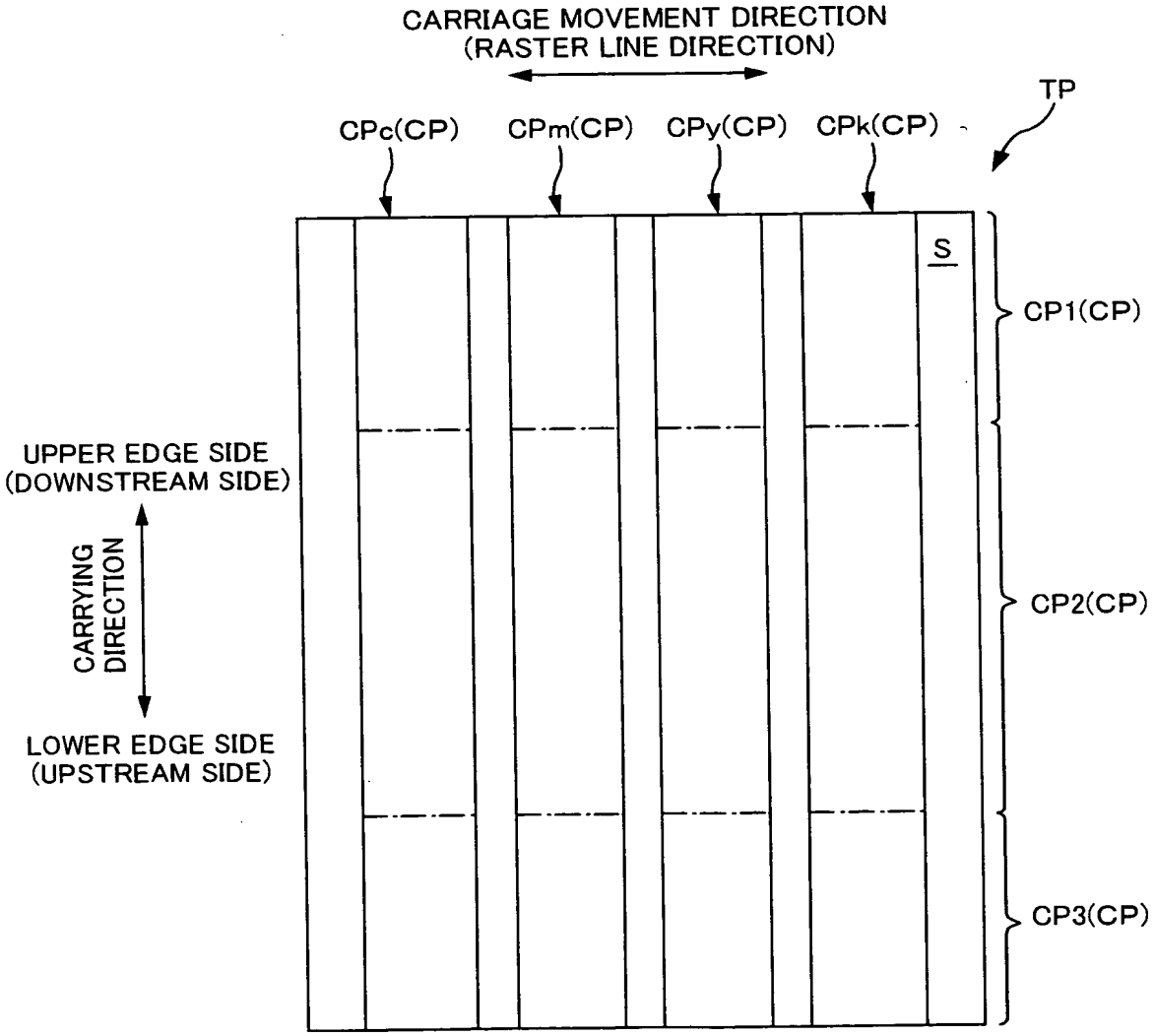

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
TP
CPc(CP)
CPm(CP)
CPy(CP)
CPk(CP)
S
CP1(CP)
CP2(CP)
CP3(CP)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)

Fig.28

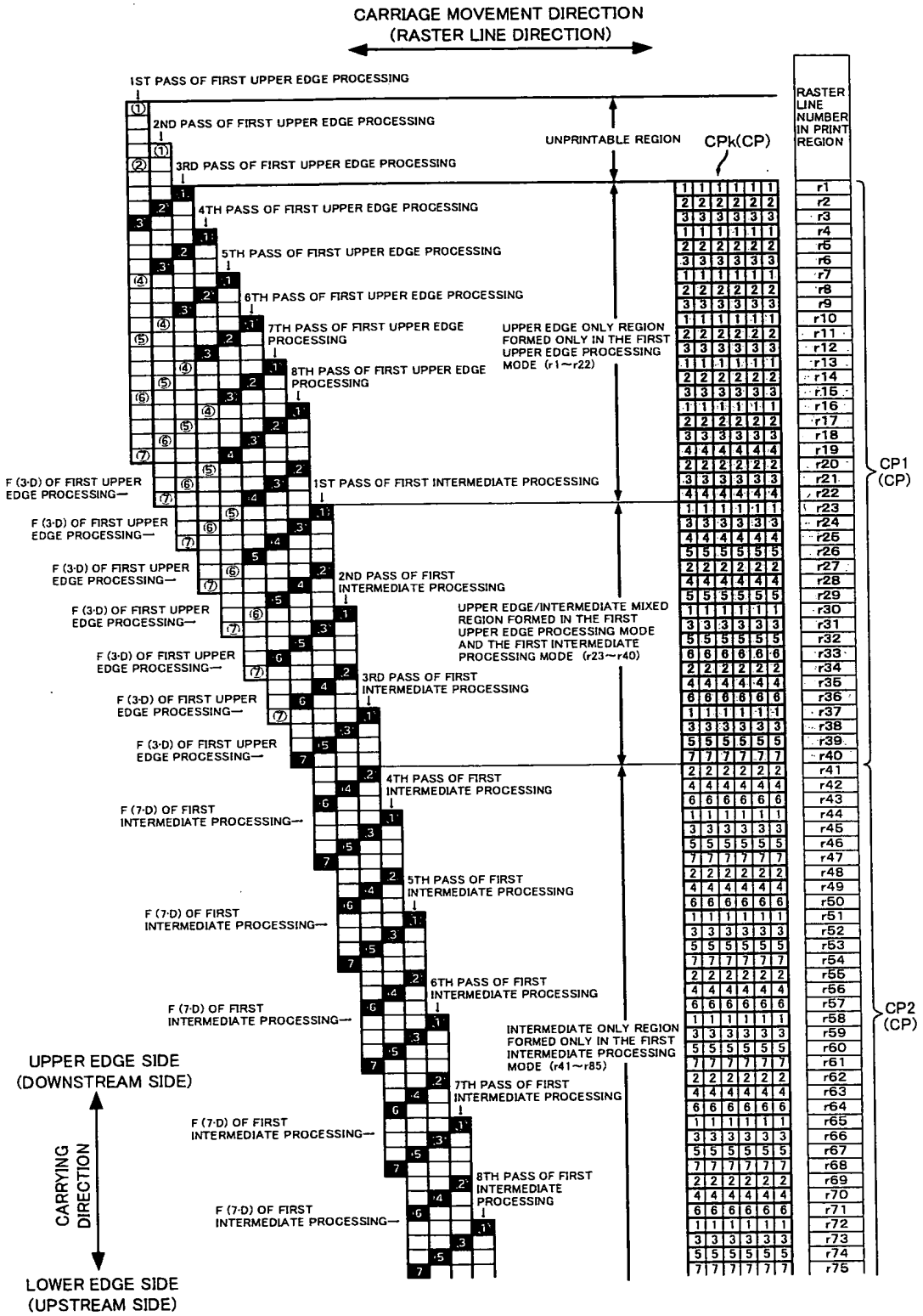

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
1ST PASS OF FIRST UPPER EDGE PROCESSING
2ND PASS OF FIRST UPPER EDGE PROCESSING
3RD PASS OF FIRST UPPER EDGE PROCESSING
4TH PASS OF FIRST UPPER EDGE PROCESSING
5TH PASS OF FIRST UPPER EDGE PROCESSING
6TH PASS OF FIRST UPPER EDGE PROCESSING
7TH PASS OF FIRST UPPER EDGE PROCESSING
8TH PASS OF FIRST UPPER EDGE PROCESSING
1ST PASS OF FIRST INTERMEDIATE PROCESSING
2ND PASS OF FIRST INTERMEDIATE PROCESSING
3RD PASS OF FIRST INTERMEDIATE PROCESSING
4TH PASS OF FIRST INTERMEDIATE PROCESSING
5TH PASS OF FIRST INTERMEDIATE PROCESSING
6TH PASS OF FIRST INTERMEDIATE PROCESSING
7TH PASS OF FIRST INTERMEDIATE PROCESSING
8TH PASS OF FIRST INTERMEDIATE PROCESSING
F (3-D) OF FIRST UPPER EDGE PROCESSING
F (7-D) OF FIRST INTERMEDIATE PROCESSING
UNPRINTABLE REGION
CPk(CP)
UPPER EDGE ONLY REGION FORMED ONLY IN THE FIRST UPPER EDGE PROCESSING MODE (r1~r22)
UPPER EDGE/INTERMEDIATE MIXED REGION FORMED IN THE FIRST UPPER EDGE PROCESSING MODE AND THE FIRST INTERMEDIATE PROCESSING MODE (r23~r40)
INTERMEDIATE ONLY REGION FORMED ONLY IN THE FIRST INTERMEDIATE PROCESSING MODE (r41~r85)
RASTER LINE NUMBER IN PRINT REGION
CP1 (CP)
CP2 (CP)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)

Fig.29A

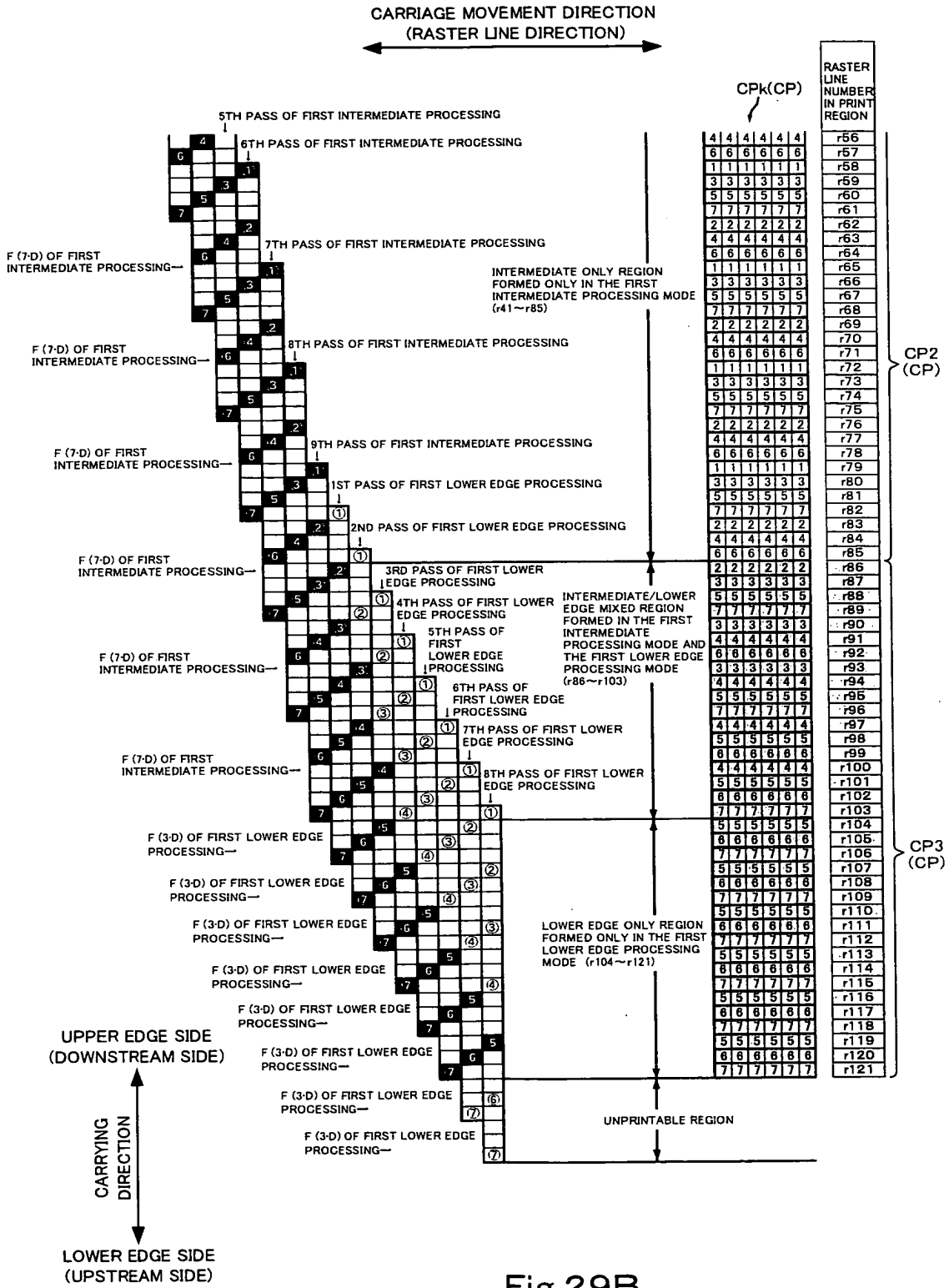

CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
CPk(CP)
RASTER LINE NUMBER IN PRINT REGION
5TH PASS OF FIRST INTERMEDIATE PROCESSING
6TH PASS OF FIRST INTERMEDIATE PROCESSING
7TH PASS OF FIRST INTERMEDIATE PROCESSING
8TH PASS OF FIRST INTERMEDIATE PROCESSING
9TH PASS OF FIRST INTERMEDIATE PROCESSING
1ST PASS OF FIRST LOWER EDGE PROCESSING
2ND PASS OF FIRST LOWER EDGE PROCESSING
3RD PASS OF FIRST LOWER EDGE PROCESSING
4TH PASS OF FIRST LOWER EDGE PROCESSING
5TH PASS OF FIRST LOWER EDGE PROCESSING
6TH PASS OF FIRST LOWER EDGE PROCESSING
7TH PASS OF FIRST LOWER EDGE PROCESSING
8TH PASS OF FIRST LOWER EDGE PROCESSING
F (7-D) OF FIRST INTERMEDIATE PROCESSING
F (3-D) OF FIRST LOWER EDGE PROCESSING
INTERMEDIATE ONLY REGION FORMED ONLY IN THE FIRST INTERMEDIATE PROCESSING MODE (r41~r85)
INTERMEDIATE/LOWER EDGE MIXED REGION FORMED IN THE FIRST INTERMEDIATE PROCESSING MODE AND THE FIRST LOWER EDGE PROCESSING MODE (r86~r103)
LOWER EDGE ONLY REGION FORMED ONLY IN THE FIRST LOWER EDGE PROCESSING MODE (r104~r121)
UNPRINTABLE REGION
CP2 (CP)
CP3 (CP)
UPPER EDGE SIDE (DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE (UPSTREAM SIDE)

Fig.29B

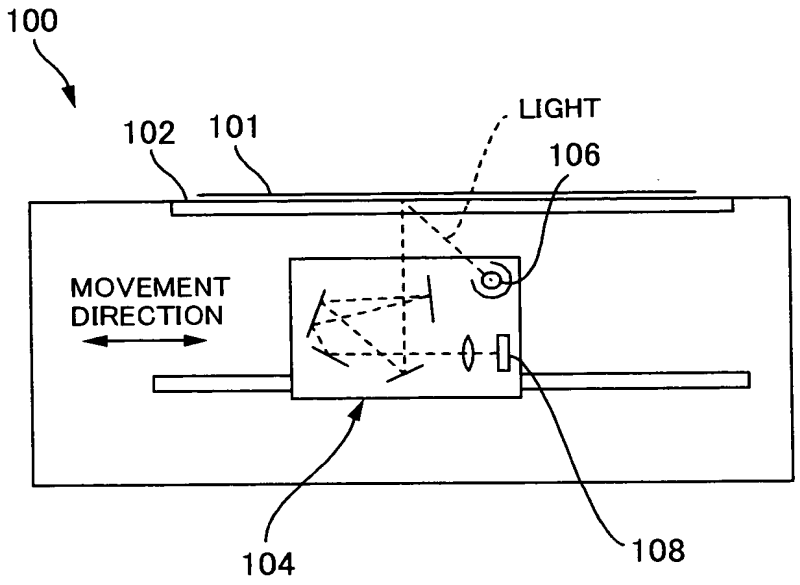


Fig.30A

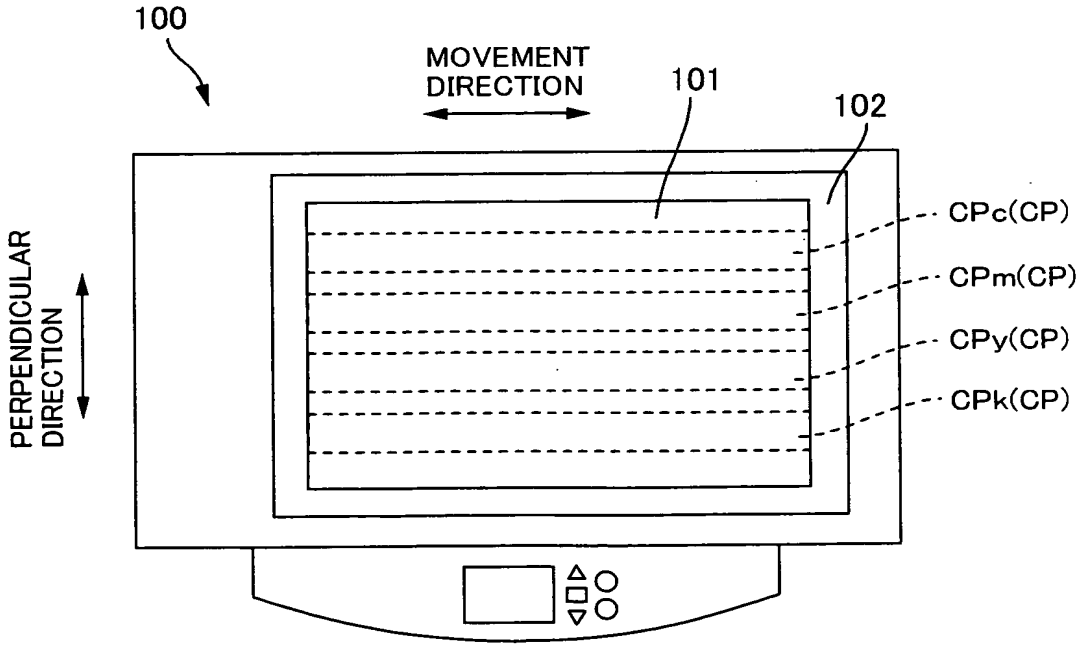


Fig.30B

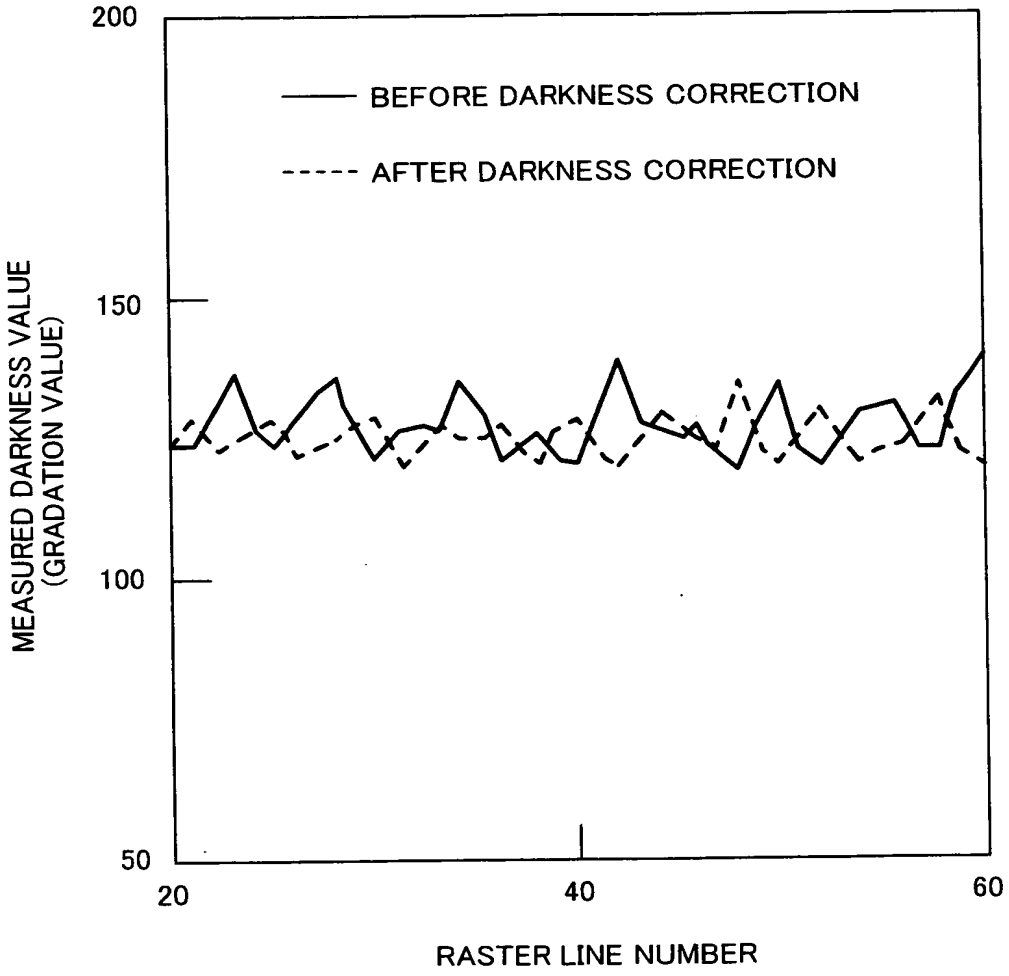
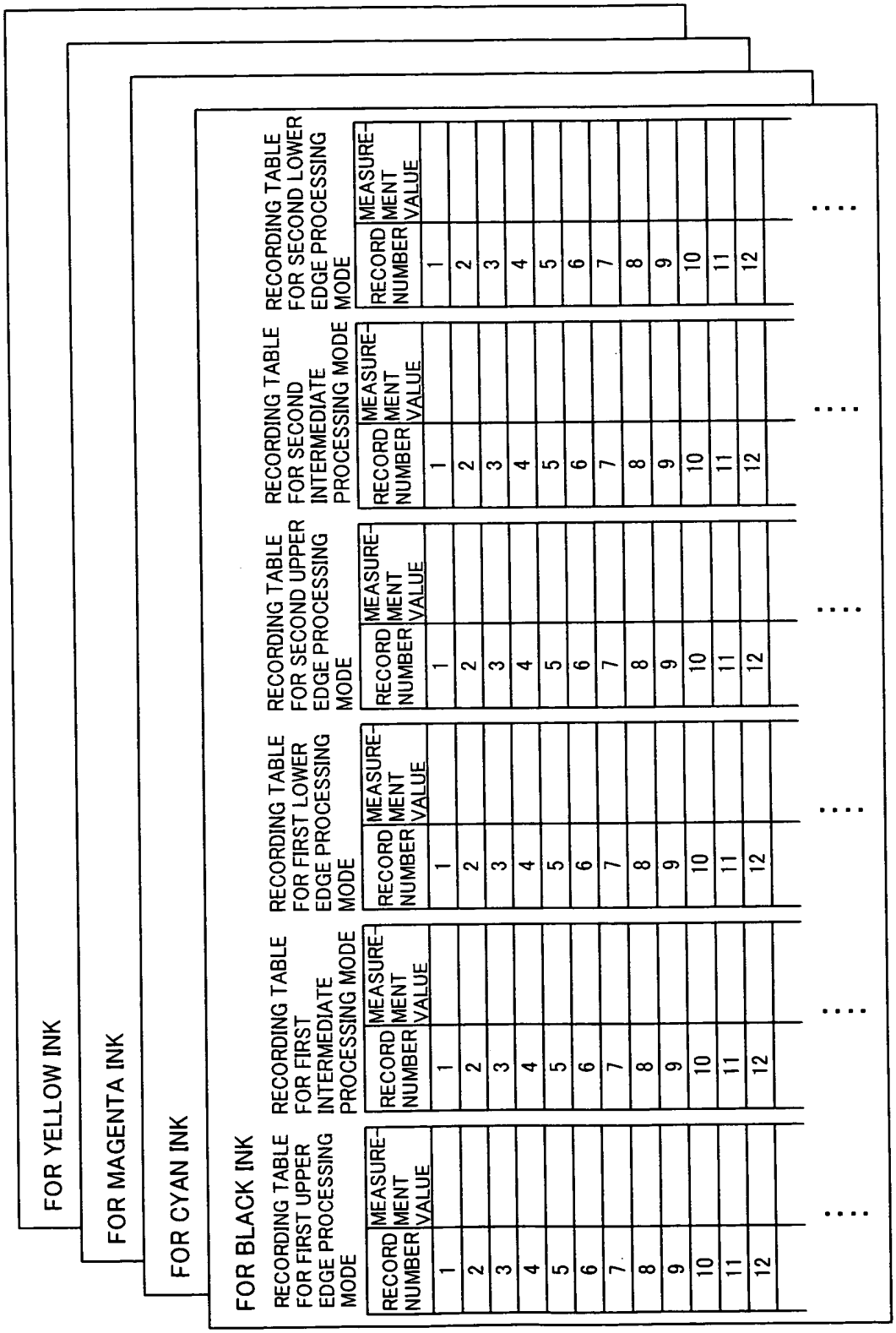

200
150
100
50
20
40
60
BEFORE DARKNESS CORRECTION
AFTER DARKNESS CORRECTION
MEASURED DARKNESS VALUE
(GRADATION VALUE)
RASTER LINE NUMBER

Fig.31


FOR YELLOW INK
FOR MAGENTA INK
FOR CYAN INK
FOR BLACK INK
RECORDING TABLE FOR FIRST UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR FIRST INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR FIRST LOWER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR SECOND LOWER EDGE PROCESSING MODE
RECORD NUMBER
MEASUREMENT VALUE
1
2
3
4
5
6
7
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9
10
11
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Fig.32

RECORDING TABLE FOR FIRST UPPER EDGE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
10	* * *
11	* * *
12	* * *
13	* * *
14	* * *
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Fig.33A

RECORDING TABLE FOR FIRST INTERMEDIATE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
10	* * *
11	* * *
12	* * *
13	* * *
14	* * *
15	* * *
16	* * *
17	* * *
18	* * *
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Fig.33B

RECORDING TABLE FOR FIRST LOWER EDGE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
10	* * *
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14	* * *
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18	* * *
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35	* * *
36	* * *
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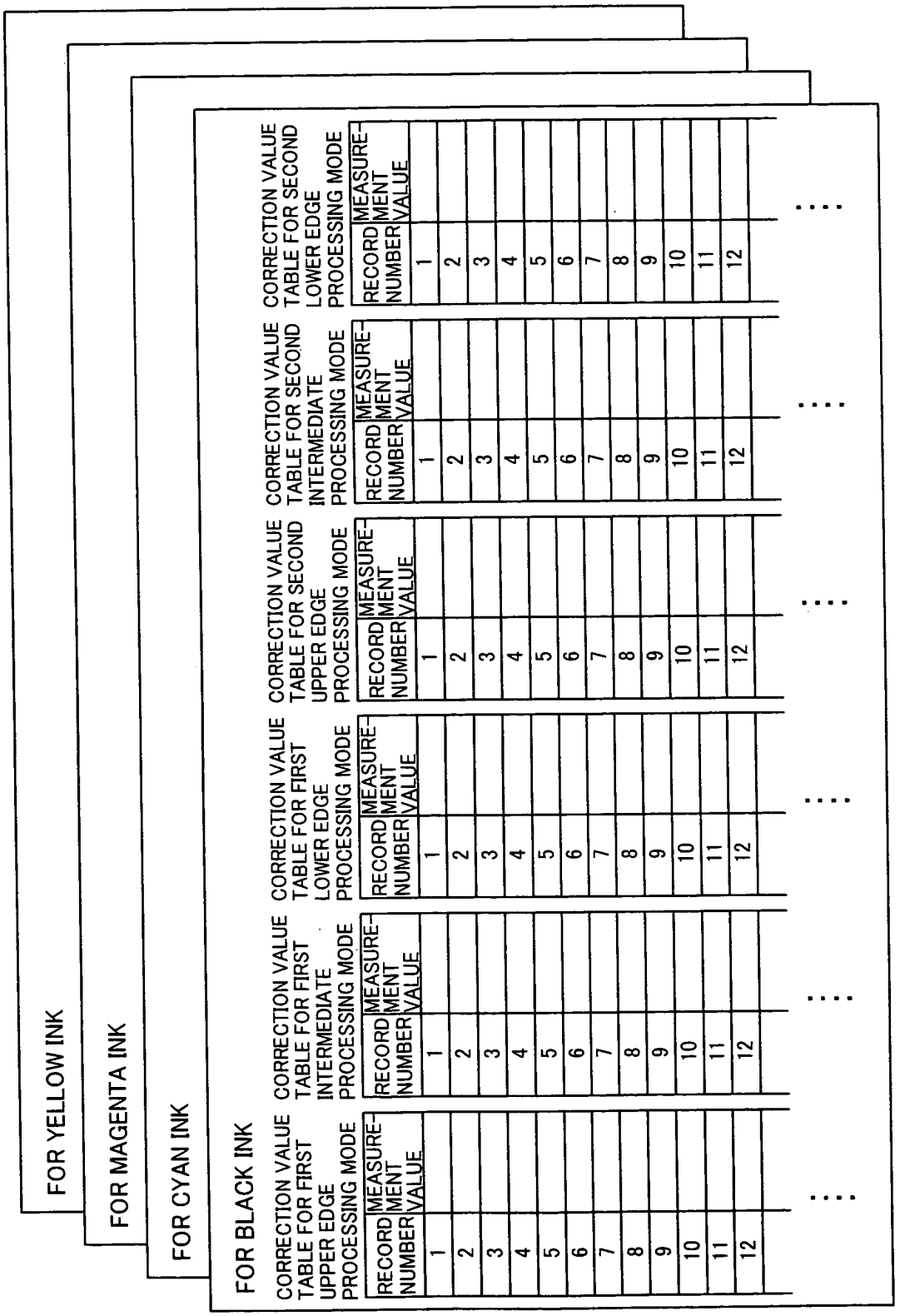
Fig.33C


FOR YELLOW INK
FOR MAGENTA INK
FOR CYAN INK
FOR BLACK INK
CORRECTION VALUE TABLE FOR FIRST UPPER EDGE PROCESSING MODE
CORRECTION VALUE TABLE FOR FIRST INTERMEDIATE PROCESSING MODE
CORRECTION VALUE TABLE FOR FIRST LOWER EDGE PROCESSING MODE
CORRECTION VALUE TABLE FOR SECOND UPPER EDGE PROCESSING MODE
CORRECTION VALUE TABLE FOR SECOND INTERMEDIATE PROCESSING MODE
CORRECTION VALUE TABLE FOR SECOND LOWER EDGE PROCESSING MODE
RECORD NUMBER
MEASUREMENT VALUE
1
2
3
4
5
6
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11
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Fig.34

CORRECTION VALUE TABLE FOR FIRST UPPER EDGE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
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11	* * *
12	* * *
13	* * *
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Fig.35A

CORRECTION VALUE TABLE FOR FIRST INTERMEDIATE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
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Fig.35B

CORRECTION VALUE TABLE FOR FIRST LOWER EDGE PROCESSING MODE

RECORD NUMBER	MEASUREMENT VALUE
1	* * *
2	* * *
3	* * *
4	* * *
5	* * *
6	* * *
7	* * *
8	* * *
9	* * *
10	* * *
11	* * *
12	* * *
13	* * *
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Fig.35C

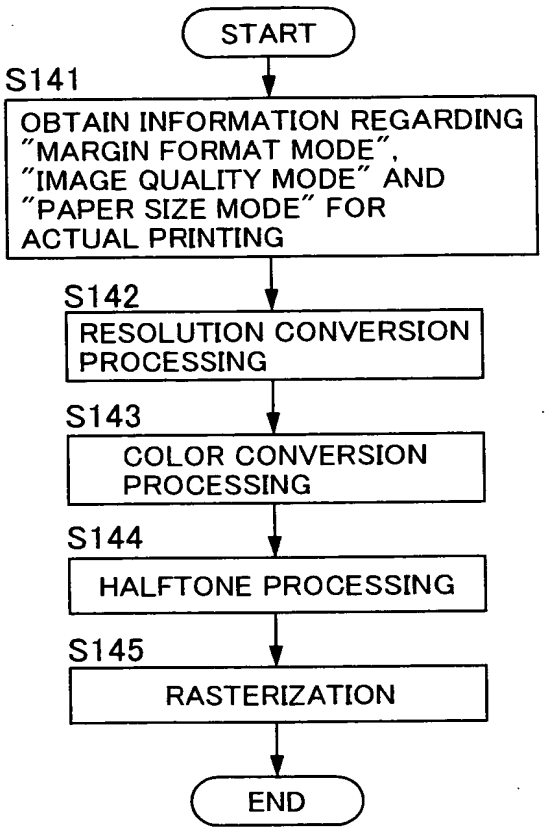
START
S141
OBTAIN INFORMATION REGARDING "MARGIN FORMAT MODE", "IMAGE QUALITY MODE" AND "PAPER SIZE MODE" FOR ACTUAL PRINTING
S142
RESOLUTION CONVERSION PROCESSING
S143
COLOR CONVERSION PROCESSING
S144
HALFTONE PROCESSING
S145
RASTERIZATION
END

Fig.36

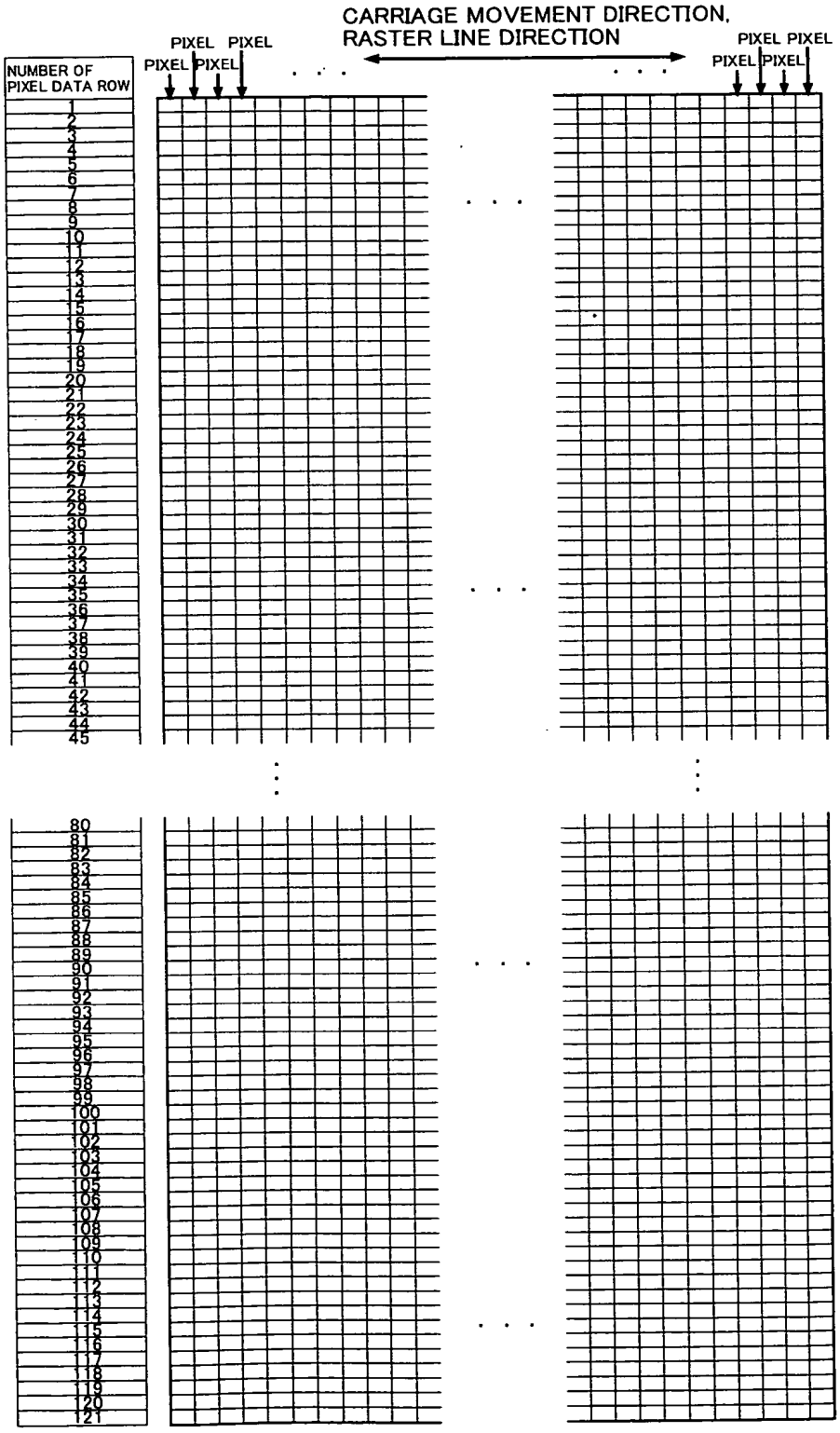
CARRIAGE MOVEMENT DIRECTION,
RASTER LINE DIRECTION
NUMBER OF PIXEL DATA ROW
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL

Fig.37

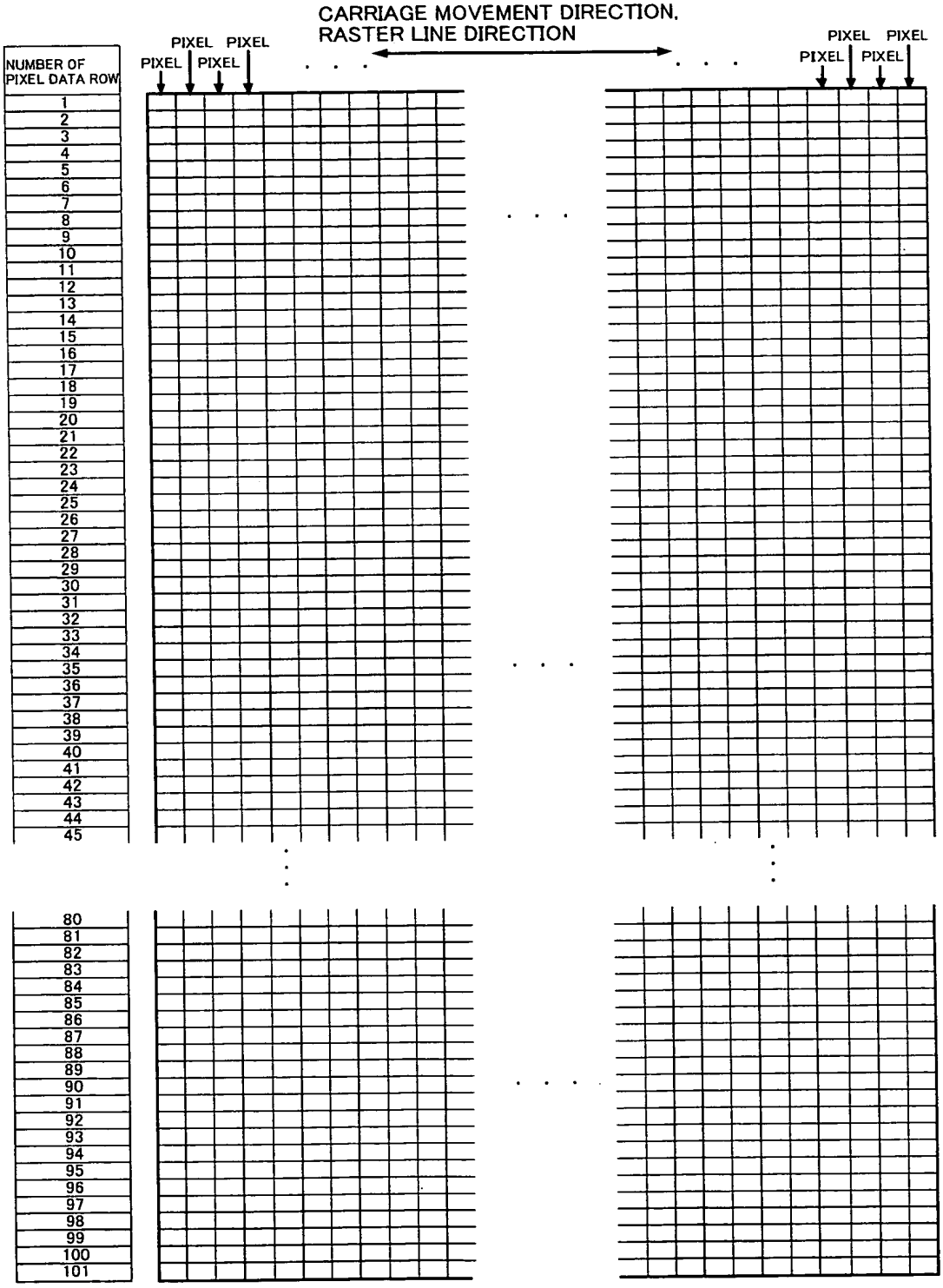
CARRIAGE MOVEMENT DIRECTION,
RASTER LINE DIRECTION
NUMBER OF PIXEL DATA ROW
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL
PIXEL

Fig.38

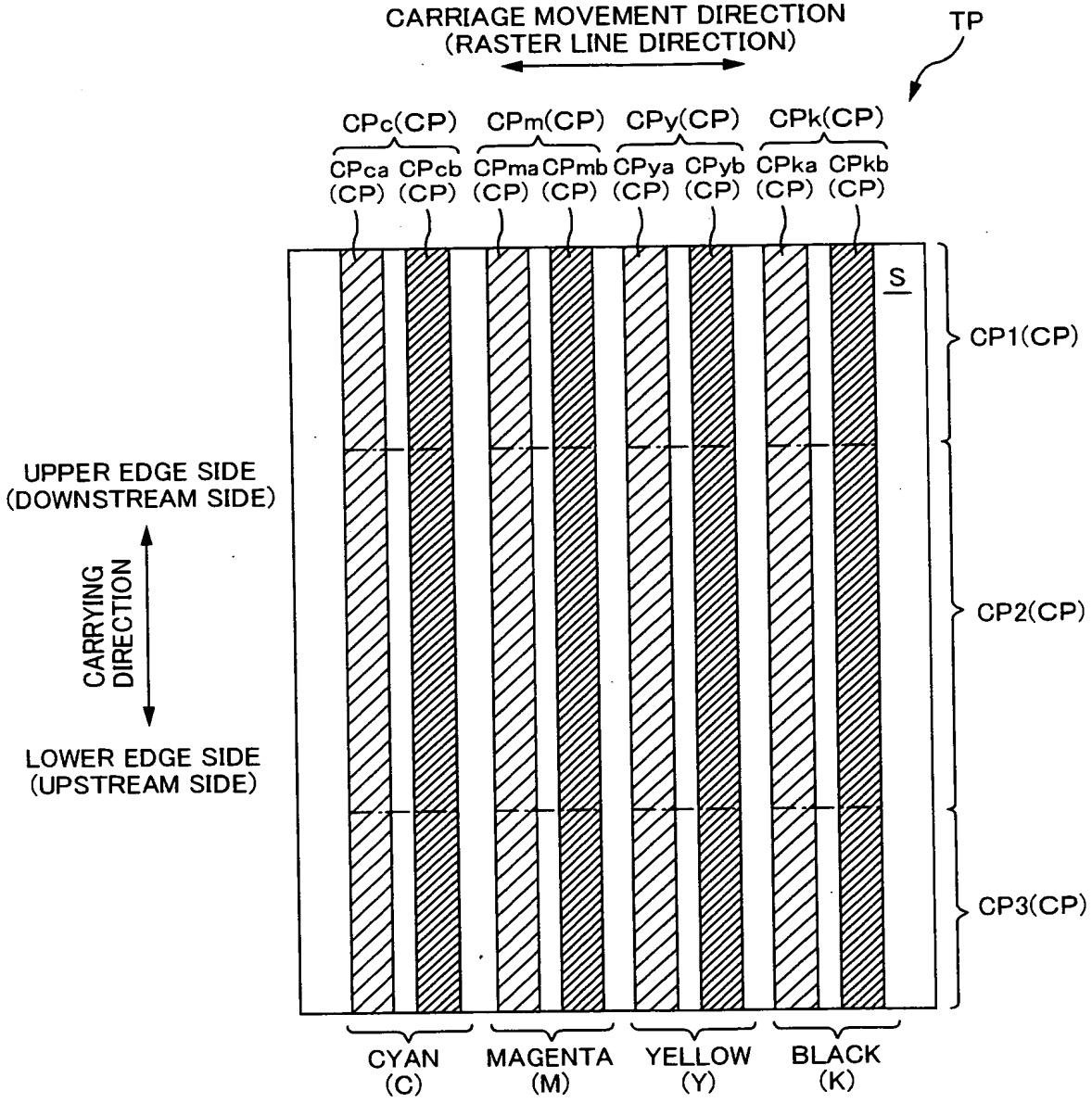
CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
TP
CPc(CP)
CPm(CP)
CPy(CP)
CPk(CP)
CPca (CP)
CPcb (CP)
CPma (CP)
CPmb (CP)
CPya (CP)
CPyb (CP)
CPka (CP)
CPkb (CP)
S
CP1(CP)
CP2(CP)
CP3(CP)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
CYAN
(C)
MAGENTA
(M)
YELLOW
(Y)
BLACK
(K)

Fig.39

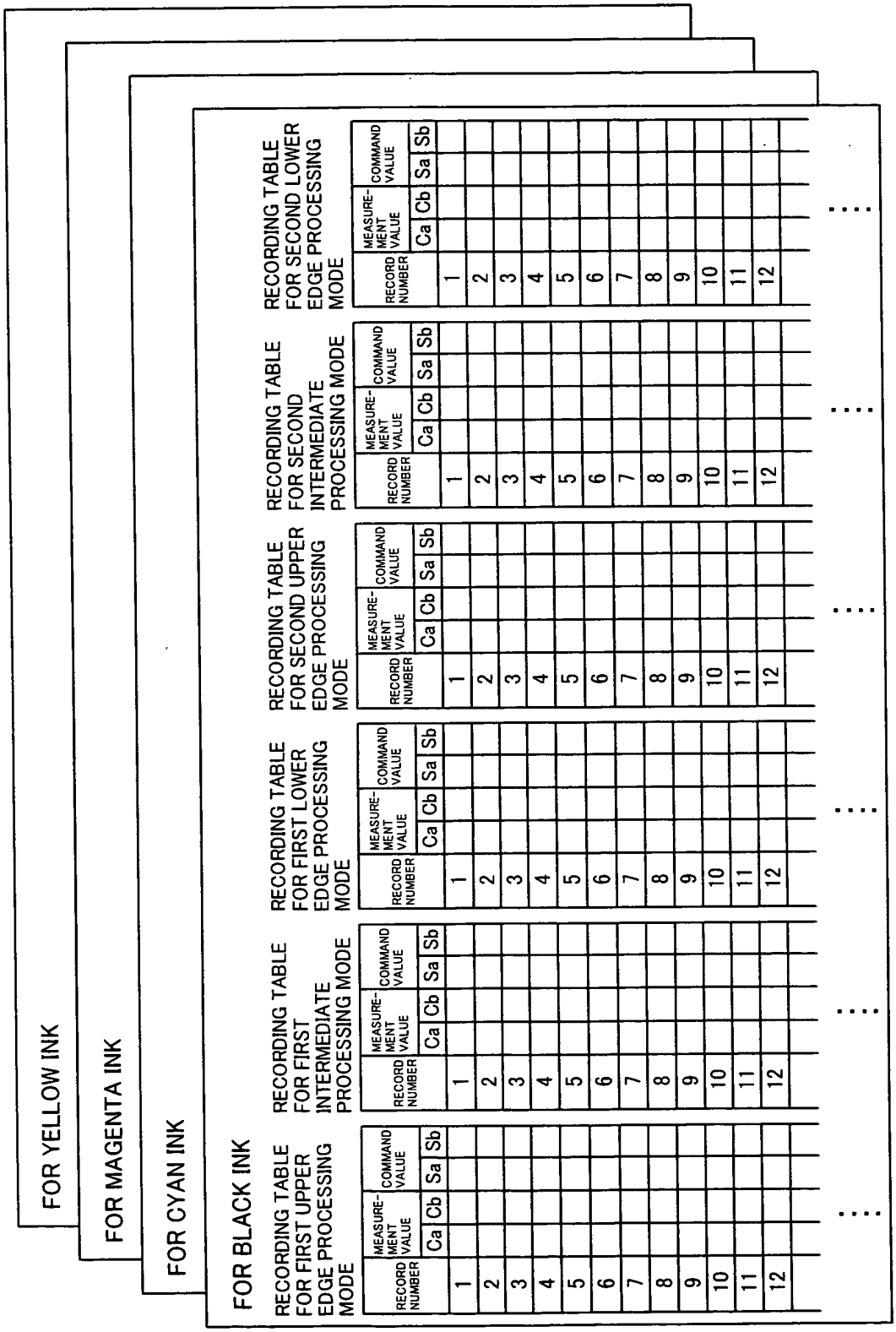
FOR YELLOW INK
FOR MAGENTA INK
FOR CYAN INK
FOR BLACK INK
RECORDING TABLE FOR FIRST UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR FIRST INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR FIRST LOWER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR SECOND LOWER EDGE PROCESSING MODE
RECORD NUMBER
MEASUREMENT VALUE
Ca
Cb
COMMAND VALUE
Sa
Sb

Fig.40

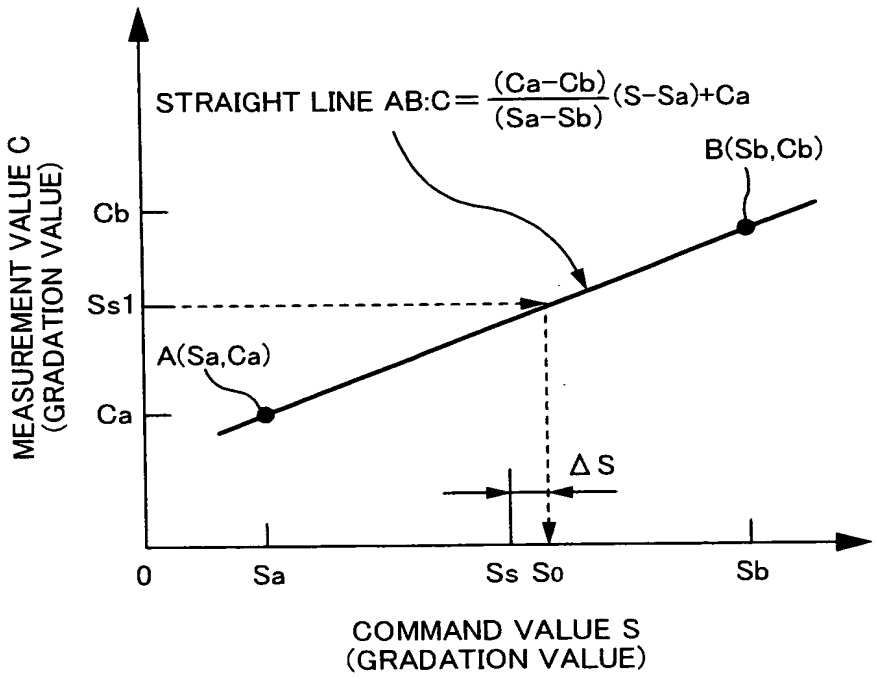
STRAIGHT LINE AB:C=(Ca−Cb)/(Sa−Sb)(S−Sa)+Ca
B(Sb,Cb)
Cb
Ss1
A(Sa,Ca)
Ca
ΔS
MEASUREMENT VALUE C
(GRADATION VALUE)
0
Sa
Ss So
Sb
COMMAND VALUE S
(GRADATION VALUE)

Fig.41

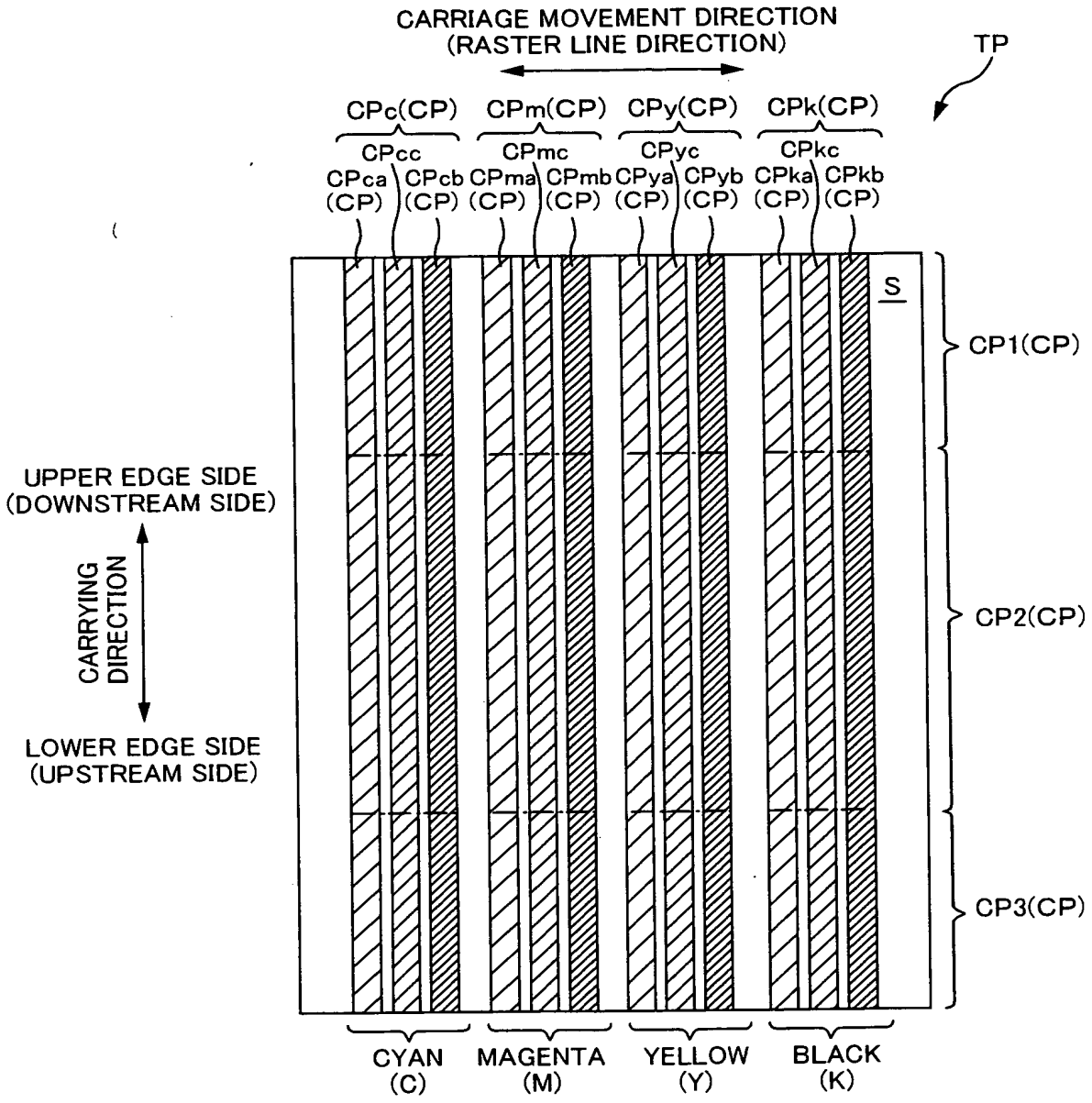
CARRIAGE MOVEMENT DIRECTION
(RASTER LINE DIRECTION)
TP
CPc(CP)
CPm(CP)
CPy(CP)
CPk(CP)
CPcc
CPmc
CPyc
CPkc
CPca (CP)
CPcb (CP)
CPma (CP)
CPmb (CP)
CPya (CP)
CPyb (CP)
CPka (CP)
CPkb (CP)
S
CP1(CP)
CP2(CP)
CP3(CP)
UPPER EDGE SIDE
(DOWNSTREAM SIDE)
CARRYING DIRECTION
LOWER EDGE SIDE
(UPSTREAM SIDE)
CYAN (C)
MAGENTA (M)
YELLOW (Y)
BLACK (K)

Fig.42

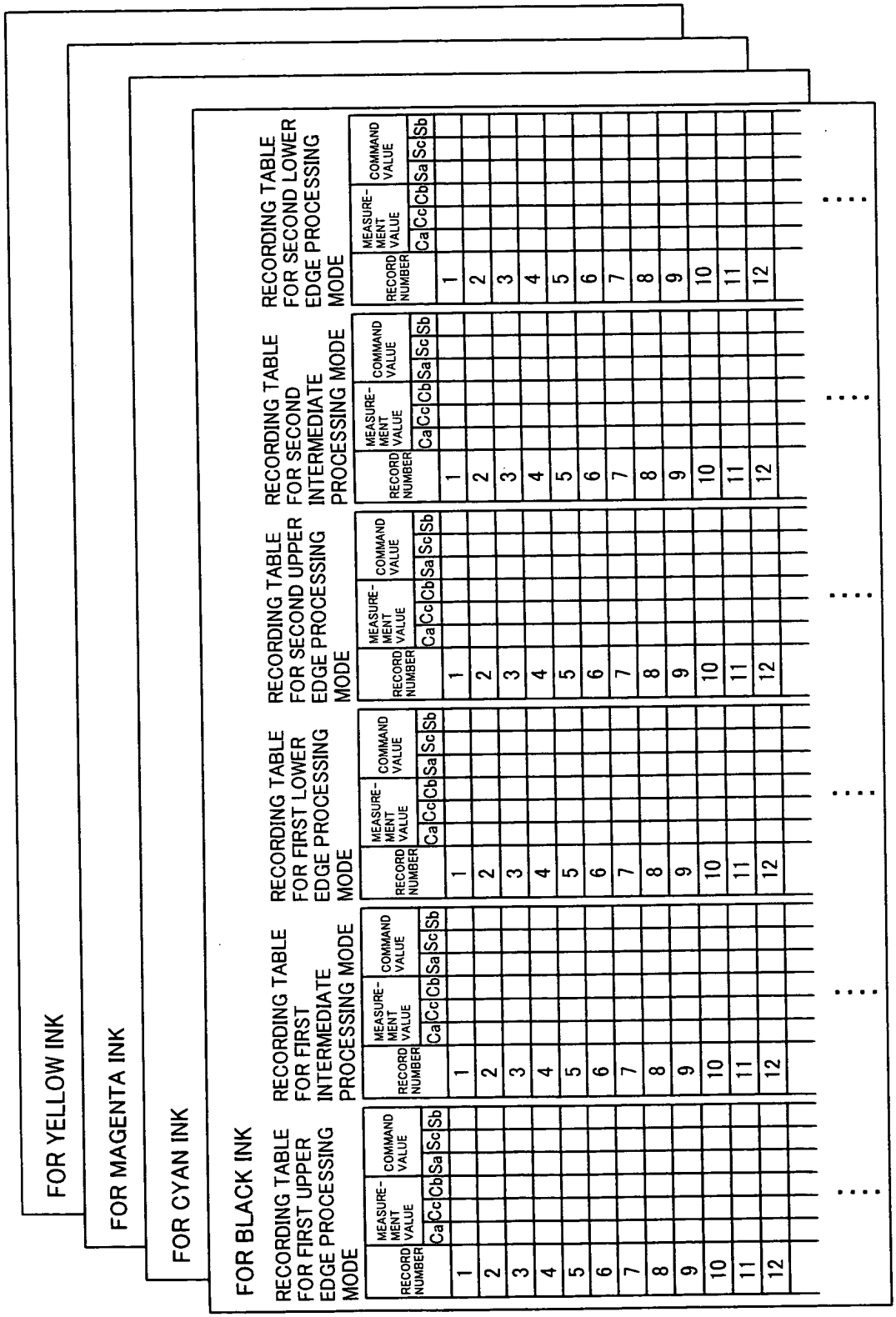
FOR YELLOW INK
FOR MAGENTA INK
FOR CYAN INK
FOR BLACK INK
RECORDING TABLE FOR FIRST UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR FIRST INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR FIRST LOWER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND UPPER EDGE PROCESSING MODE
RECORDING TABLE FOR SECOND INTERMEDIATE PROCESSING MODE
RECORDING TABLE FOR SECOND LOWER EDGE PROCESSING MODE
RECORD NUMBER
MEASURE-MENT VALUE
Ca
Cc
Cb
Sa
COMMAND VALUE
Sc
Sb

Fig.43

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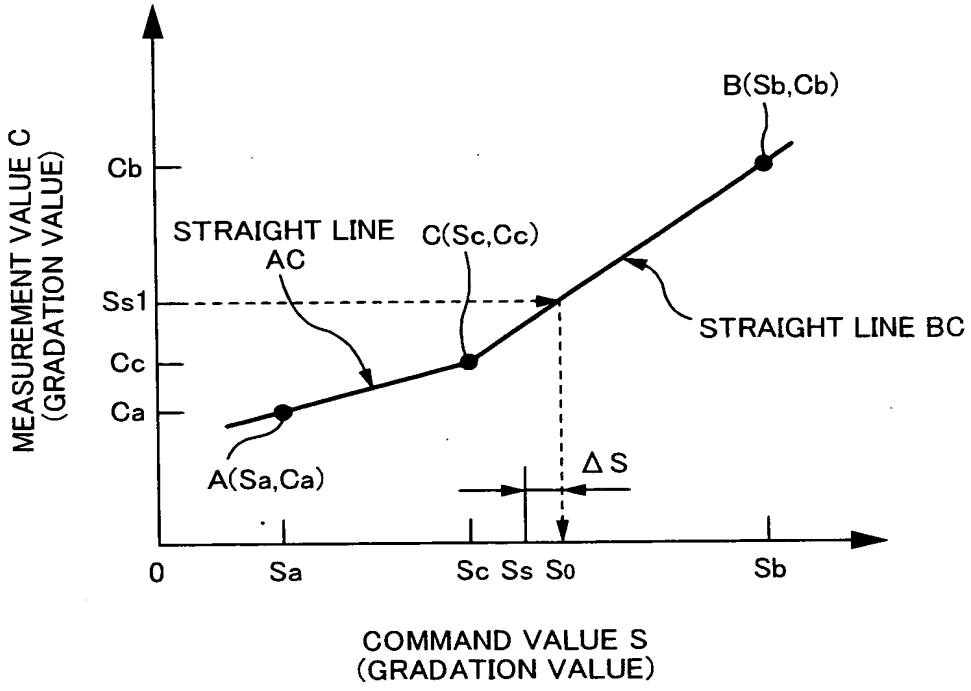
B(Sb,Cb)
Cb
STRAIGHT LINE AC
C(Sc,Cc)
Ss1
STRAIGHT LINE BC
Cc
Ca
A(Sa,Ca)
ΔS
MEASUREMENT VALUE C (GRADATION VALUE)
0
Sa
Sc Ss So
Sb
COMMAND VALUE S (GRADATION VALUE)

Fig.44